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ABSTRACT

A study examined the accommodations provided to handicapped employees by federal contractors. During the 20-month project, researchers surveyed 2,000 federal contractors, conducted telephone interviews with 85 firms, surveyed disabled workers, and conducted intensive case studies of 10 firms identified from their survey or telephone responses as having exemplary accommodation practices. Based on these data, the researchers concluded that for firms that have made efforts to hire handicapped individuals, accommodation does not involve much in the way of actual costs. In 51 percent of the cases reported, accommodation cost nothing and in 30 percent of the remaining cases it cost less than $500, with the most expensive and extensive accommodations provided largely to blind persons and individuals in wheelchairs. Accommodation efforts are generally perceived as successful in allowing workers to be effective on the job. While variations exist in who receives accommodation, the basic pattern appears to be that once individuals are hired, they are likely to be accommodated, regardless of occupation or seniority. Included among the recommendations emerging from the project were calls for tax credits for expensive accommodations, for adding a line item in federal contracts under a standard formula for accommodations for disabled workers used on contracts, and for technical assistance and, possibly, cost sharing in accommodation. (MN)

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ED233184

A STUDY OF ACCOMMODATIONS PROVIDED TO HANDICAPPED EMPLOYEES BY FEDERAL CONTRACTORS

Final Report

VOLUME I: Study Findings

June 17, 1982

Contract No. J-9-E-1-0009

Prepared for:

U.S. Department of Labor
Employment Standards Administration

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Those individuals who assisted us by planning and coordinating case study visits to their respective firms merit a special thanks, namely representatives from the following companies:

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We would like to express our thanks to these and other persons we encountered during the study, whose efforts both on our behalf and in improving employment opportunities for disabled and handicapped individuals have been noteworthy.

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EXECUTIVE SUMMARY

Berkeley Planning Associates, in collaboration with its subcontractor Harold Russell Associates, has completed for the Department of Labor (DOL) the first national survey of private sector employers contracting with the federal government concerning their accommodation practices for handicapped employees. The survey sought to provide a better base of information to the government for implementing Section 503 of the Rehabilitation Act of 1973 which stipulates that, for any contract in excess of $2,500, "the party contracting with the United States shall take affirmative action to employ and advance in employment qualified handicapped individuals...." The principal objectives of the DOL survey were to discover the prevalence of current accommodation effort and the types and costs of accommodations currently being provided, to explore the related practices that firms have found conducive to successful accommodation, and to understand the decision-making process involved.

The 20-month study had four major components:

- a survey of 2,000 federal contractors, documenting the extent, nature, and costs of the accommodations provided, together with the relationship between firms' attitudes toward accommodations and handicapped workers and the actions these firms had taken. Responses were analyzed for 367 responding firms, representing 512,000 workers, of whom 19,200 were known to be handicapped;
- telephone interviews with 85 firms to explore in some detail the circumstances surrounding a single accommodation: how and why it was undertaken and with what results;
- a survey of disabled workers to learn their perceptions about any accommodations that may have been made for them; and
- intensive case studies of ten firms identified from their survey and/or telephone responses as having exemplary accommodation practices.

The findings across surveys proved internally consistent. Several biases in data should be made clear, however. Firms often lack internal data on accommodation or handicapped workers; thus the data reported are

probably minimum estimates of the extent of accommodation and hiring of handicapped at the responding firms; firms often are unaware of employees with hidden disabilities who have chosen not to self-identify, such as those with past histories of mental illness, heart condition, cancer, etc; central management is often unaware of inexpensive accommodations rountinely and informally done at the job station. Because of the low response rate to the mail survey, there is an inherent limit on generalizability. On the other hand, outside reviews of the findings by industry advisors have found the findings to conform with their firms' experiences. The lack of obvious biases in response rate among types of firms and the agreement across the different data sources provide further evidence of the validity of the findings.

SUMMARY OF FINDINGS

- An overall conclusion of the analysis is that for firms which have made efforts to hire the handicapped, accommodation is "no big deal." Rarely did an accommodation involve much cost 51% of those reported cost nothing; an additional 30% cost less than $500. Only 8% cost more than $2,000.
- The average firm reported that about 2.5% of the workforce is handicapped; overall, about 3.5% of workers are handicapped, as large firms have high proportions of handicapped workers.
- Accommodation efforts are generally perceived as successful in allowing the worker to be effective on the job. Firms frequently reported that the accommodation would benefit the employee if promoted to a new job, and often stated that other nondisabled workers also benefited from the accommodation.
- It would appear, overall, that there is not a strong relationship between accommodation and upward mobility either in terms of providing advantage or limiting potential. Upward mobility will require special emphasis from both firms and DOL as they attempt to ensure equal opportunities for handicapped workers.
- Accommodations for individual workers take many forms; adapting the work environments and location of the job, retraining or selectively placing the worker in jobs needing no accommodation, providing transportation or special equipment or aides, redesigning the worker's job, and re-orienting or providing special training to supervisors and co-workers. No particular type of accommodation dominates. Most workers received more than one kind of accommodation.

- There are variations in who receives accommodation, but the basic pattern appears to be that once an individual is hired, he or she is likely to be accommodated regardless of occupation or seniority. Firms consistently reported that the key for a handicapped applicant to be hired is the possession of skills needed by the firm.

- The most expensive and extensive accommodations tended to be provided to the blind and those in wheelchairs. Higher skill workers were more often provided environmental adaptations of the workplace or special equipment than lower skilled workers. Lower skill workers were more likely to receive job redesign accommodations, retraining, or selective placement.

- Large firms were the most likely to hire and accommodate handicapped workers. Respondents attributed the success of large firms to the existence of affirmative action mechanisms, to their likelihood, because of sheer numbers, of encountering handicapped workers, and to the diversity of job types which leads to flexibility in assigning or transferring workers.

- 28% of firms report no handicapped workers. An additional 17% have made no accommodation. Thus, about 55% of firms have some accommodation experience.

DECISION FACTORS

- Firms reported that accommodation was undertaken because it was good business practice, akin to the provision of tools or other aids to non-disabled workers to increase productivity or accommodate personal needs.

- Some factors long thought to be a barrier to accommodation did not emerge as major constraints. Almost no firms reported that anticipated negative reactions from customer, co-workers, or unions deterred accommodation. Rarely was cost cited as a barrier, though some interview respondents confessed that, particularly in times of economic recessions, costs are weighed carefully.

- The impediments to accommodation that most often were cited were the lack of skills (including job readiness) of many handicapped applicants, which made accommodation an "uncertain investment" and the perception that some worksites were inherently too unsafe for accommodation to be feasible.

- The 1973 Rehabilitation Act, subsequent regulations and the surrounding publicity have stimulated accommodation activity and architectural barrier

removal, and raised the consciousness of management, supervisors, and disabled workers concerning the need for accommodation. Affirmative action and personnel officers cited the law and regulations in justifying accommodation inside the firm, even when regulations did not strictly require the specific actions they were recommending to management.

- Most of the accommodations reported went far beyond the requirements of regulations, in response to the acceptance by management of the legitimacy and appropriateness of accommodation. Thus, a major factor encouraging accommodation was the affirmative action commitment of top management.

PRACTICES

Among firms with accommodation experience, the following practices were identified as facilitating accommodation:

- strong and visible expression of commitment by top management to accommodating disabled workers, which most often sets the tone throughout the whole firm;
- assignment of a specialist within the EEO/Affirmative Action function specifically for carrying out affirmative action and EEO policies for the handicapped;
- establishing special procedures for reviewing and tracking applications of handicapped applicants;
- centralizing recruiting, intake and monitoring of hiring decisions for handicapped workers to increase the probability of the disabled applicant's capacity for doing a job being considered by all units in the organization, and providing a central special budget for accommodations above the budget limits of individual departments or divisions;
- encouraging managers and supervisors to think of jobs or task assignments where the handicap, and thus the need for changes in the physical environment or in the job's design, are minimized;
- developing a procedure for orienting the handicapped worker to the workplace and pre-employment discussion to orient supervisors and coworkers to the special needs of the worker;
- spreading the word inside the firm about successful experiences in accommodation, which appears to increase receptivity to later appeals for

accommodation, and following successes with referrals of later handicapped applicants to departments where they have increased likelihood of being hired;

- training by the firm of inside personnel staff, line managers, supervisors, and coworkers about the affirmative action policies of the firm and dispelling common myths about disabled workers;
- explicit contact in recruitment and outreach to outside organizations able to refer disabled job applicants, and subsequent use of such outside resources for advice and expertise concerning the disabled applicant's qualifications and the kinds of accommodations that might be appropriate;
- sharing information and experiences with other firms, and participation in direct training of potential future job applicants through programs like Projects With Industry (PWI).
- involving handicapped workers in their own accommodation processes, as well as in efforts to increase disability awareness internally;
- re-evaluating accommodation needs on a continuing basis, perhaps as part of the performance review process.

RECOMMENDATIONS

- Provide tax credits for expensive accommodations.
- Add a line item in federal contracts under a standard formula for accommodations of disabled workers used on contracts. The standard formula (e.g., half of a percent of total direct costs) would apply to all bidders. It would provide the financial means to secure accommodation of disabled workers without hurting the financial performance of any firm. Any claims on the line item by firms would have to be fully documented before cost reimbursement. Any unused funds in that line item under the contract would be returned to the Treasury, thus providing no incentive to avoid accommodation. This recommendation emerged in interviews with corporate leaders.
- Provide technical assistance and possibly cost sharing in accommodation. This may particularly be needed with the small business sector, which is both the source of a disproportionate share of new jobs being created in the economy, and also the sector least likely to hire and accommodate the handicapped due to limited personnel systems, diversity of occupations, and experience with accommodation. Government-funded rehabilitation engineering centers are one possible source of such expertise, but more locally available sources are needed, possibly drawing on state VR programs for supply.

- Provide technical assistance on related practices, such as how to handle accommodation issues during the interview process, how to overcome attitudinal barriers, useful testing procedures for persons with specific disabilities.

- Increase active placement and referral of handicapped applicants being trained by public manpower and educational programs and increasing the effectiveness of job search activity on the part of disabled individuals.

- Expand training of handicapped workers in technical skills (and work readiness) relevant to current employers, possibly through an expansion of the Projects With Industry program involving employers in the design and operation of training.

- Increase opportunities for training of the most severely handicapped having the potential in high technical skill occupations (e.g., engineering), even when the training may involve expensive higher education.

- Focus placement efforts in the short run on firms most likely to hire: larger firms, high tech industries, relatively capital-intensive industries, and firms highly dependent upon federal contracts, where the prospects for securing accommodation for handicapped workers are the greatest.

- Disseminate information about why hiring and accommodating handicapped workers is good business. Such information, like that currently provided internally by some firms, would concentrate on the documented productivity, low turnover, good attendance, and high motivation of handicapped workers.

- Disseminate the "success stories" of industry in accommodation among firms. Presentations by industry representatives will be more credible to other firms than government presentations and public relations campaigns.

- Self-identification is inadequate currently in identifying handicapped workers in need of accommodation. Handicapped workers need to be strongly encouraged by government publicity, by employers, and by those programs training and placing the handicapped to self-identify, both to protect their future rights and also for the sake of helping handicapped workers in general by helping sensitize employers to the prevalence of disability among their work force.

- "Reasonable accommodation" remains impossible to define except on a case-by-case basis. The most valid approach to assessing "reasonableness," in the researchers' judgment, is not to measure outcome and prevalence, but

rather the process that firms go through in assessing whether a worker is able to do a job and whether accommodation is feasible. Questions which could be used by EEO compliance officers to assist in this process are suggested in the body of the final report.

An emphasis on stringent enforcement, if undertaken, must be accompanied by the knowledge that it would change the climate of current attitudes, which are fairly favorable and sympathetic toward the disabled. A punitive approach might increase employment among firms currently hiring few disabled persons but this must be weighed against the loss of good will and affirmative action in many firms which are the result of favorable attitudes, including the belief that handicapped workers are likely to be extremely reliable and highly motivated. Since "hiring the handicapped" is good business and also has moral sanction in the beliefs of employers, self-enforcement has many more advantages for achieving government objectives that it may have with other groups needing affirmative action.

Only 10% - 20% of disabled workers employed by the most exemplary firms reported a need for additional accommodation. However, it must be emphasized that the current study cannot determine the kinds of accommodation which may be needed by workers who are not employed. Substantial accommodation could conceivably be needed by unemployed disabled persons and those not in the labor force. To investigate these needs, one should sample not firms or employed handicapped persons, but rather work-ready handicapped applicants, tracing their experience in seeking jobs. Such an additional study is important to undertake if the full need for job accommodation of handicapped workers is to be understood.

I. INTRODUCTION

During the past decade, the disabled have achieved a place in the general public consciousness akin to that held by other minority groups. The efforts of advocates for the disabled as well as the disabled themselves have produced greater visibility for the employment problems, access problems, and income maintenance needs faced by the estimated 12 to 36 million[1] disabled individuals in this country. Advocates of the disabled stress that it is time that the capabilities of even the most severely disabled to be productive citizens be recognized and that the private as well as the public sector open the doors to meaningful employment. Accurate unemployment figures for the disabled do not currently exist, but estimates are consistently several times higher than the figures for the population at large, ranging up to 58%.[2] Clearly special targeted efforts are needed in order to provide equal employment opportunities for the disabled. This need has been addressed in Section 503 of the Rehabilitation Act of 1973.

Section 503 of the Rehabilitation Act of 1973 stipulates that, for any contract in excess of $2,500, "the party contracting with the United States shall take affirmative action to employ and advance in employment qualified handicapped individuals..." The regulations issued in accordance with that Section elaborate on contractors' obligations under the law. These regulations state:

> A contractor must make a reasonable accommodation to the physical and mental limitations of an employee or applicant unless the contractor can demonstrate that such an accommodation would impose an undue hardship on the conduct of the contractor's business. In determining the extent of a contractor's accommodation obligations, the following factors among others may be

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[1]The higher figure is the estimate currently used by the American Coalition of Citizens with Disabilities, Washington, D.C. and its member organizations.

[2]This is the figure quoted by the Disability Rights Education and Defense Fund, Berkeley, CA.

> considered: (1) business necessity and (2) financial cost and expenses.
>
> 41 CFR 50-741.6 (d)

The Office of Federal Contract Compliance (OFCCP) in the U.S. Department of Labor (DOL) is responsible for administering Section 503 (and Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974) and for assuring compliance with the above-mentioned regulations.

The importance of finding successful ways of working with handicapped individuals was underscored by Congress in the White House Conference on Handicapped Individuals:

> The Congress finds that it is essential that recommendations be made to assure that all individuals with handicaps are able to live their lives independently and with dignity, and that the complete integration of individuals with handicaps into normal community patterns be held as the final object.

The adaptation of jobs and worksites to accommodate the special needs of handicapped workers and increase employment opportunities for the disabled is an important step towards achieving this goal. Thus, the Department of Labor contracted with Berkeley Planning Associates and Harold Russell Associates, subcontractor, to study the nature, extent, and costs of accommodations currently provided by federal contractors; to explore the decision factors, methods and related employment practices involved in providing them; and to recommend future strategies for further implementation of the Section 503 provisions.

DEFINITIONS OF ACCOMMODATION

"Accommodation" is defined here and throughout the study to include the full range of adaptations or adjustments that may make a worksite or a job more suited to the needs and abilities of a handicapped worker.[1] Accommodations include all modifications of work environment, job content, or work procedures that enable handicapped workers to compete equally for

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[1] Accommodate: (1) To do a favor or service for; oblige. (2) To provide for; supply with. (3) To contain comfortably or have space for. (4) To make suitable; adapt; adjust. (American Heritage Dictionary of the English Language, 1973.)

jobs with non-handicapped workers. In some cases accommodations are necessary for an individual to perform essential functions of his or her job. In other cases they enable handicapped workers to work more easily or more productively, or they expand the range of jobs and individual can perform. An accommodation could be any of the following:

- modification of the work site (for example, raising a desk to accommodate a wheelchiar user);
- removal of architectural barriers (for example, installing a ramp at the entrance to a building);
- provision of aids or devices (for example, providing a dictating machine or tape recorder to accommodate a blind worker);
- modification of job tasks (for example, allowing a blind office worker to substitute transcription and duplicating duties for proofreading and filing);
- a change in work hours or schedules (for example, allowing a diabetic employee to take regular meal breaks during a shift or instituting a "flextime" schedule);
- transfer to a position where a given disability would constitute less of a handicap to job performance (for example, placing a mobility-impaired employee in a bench-work or sitting job rather than more strenuous jobs).

These are only a few examples of the types of accommodations that may be provided. An accommodation may be prerequisite to a handicapped worker being able to work in any capacity (as is often the case when attendant care is required), or it may be more a matter of convenience than ability to work. An accommodation may be an informal arrangement among workers such that, for instance, one worker may perform the parts of another's job that require lifting and carrying, in exchange for tasks that include mathematical calculations. On the other hand, accommodation may involve a complex decision and implementation process involving supervisors, managers and personnel staff. It may be that the most significant form of accommodation is rather difficult to measure: the elimination of attitudinal barriers that would prevent handicapped persons from participating fully in the employment process.

The concept of "reasonable accommodation" as it applies to handicapped people was introduced in the Department of Labor's Section 503 regulation

implementing the affirmative action obligations for federal contractors. It is clear that the intent for its inclusion was to offset the limitations of handicapping conditions in an employment situation. However, beyond this statement of intent and a few specific examples of when and for whom accommodations should be provided, there was little or no specific accommodation information. Of particular note is the absence in much of the early regulatory language and related literature of any definition or explanation of the concept of reasonable accommodation and the lack of any procedural guidance for determining when and how an accommodation should be provided. The requirement for accommodating physical and mental impairments of handicapped individuals was without precedent, leaving a gap between the requirements to provide and the understanding of how to provide reasonable accommodations.

Some literature concerning reasonable accommodation since that time has attempted to provide more definition. For instance, the first Section 504 regulations issued by DHEW in 1977 went a step beyond the Section 503 regulations in providing a few generic examples of accommodations, but did not actually define or suggest procedures for determining them.

In 1979 Contract Research Corporation (CRC) developed a handbook for use by DHEW's Office for Civil Rights employees on the requirements of Section 504.[1] In their section on Employment Practices the writers borrow from statements made orally and in writing by the Director of OCR and from the dictionary in order to define the concept of "reasonable accommodation." In the handbook it is basically defined as an adjustment made to overcome the effect of an individual's handicap and to allow the individual to do the job in question without supplanting the need for the individual. Supplanting an individual's role would occur if, for example, an aide was hired to assist a handicapped employee, but the situation resulted in the aide having to perform that employee's essential job functions.

In addition, the CRC handbook explains the meaning of reasonable accommodation as it relates to specific requirements and introduces the

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[1]Contract Research Corporation, Education and Human Development, Inc. Handbook for the Implementation of Section 504 of the Rehabilitation Act of 1973 for the Department of Health, Education, and Welfare's Office for Civil Rights. 1977, pp. 106-121.

concern of the cost of accommodations as a factor for consideration. From the Section 504 regulations, it is clear that cost in relation to size and type of a recipient's organization is a valid consideration in determining "undue hardship." However, the handbook makes it clear that cost is only a consideration in determining undue hardship and not a decisive consideration in determining whether or not an accommodation is reasonable. Further, the writers explain that costs have often been exaggerated.

A Lawrence Johnson Associates (LJA) study[1] completed in 1980 defined reasonable accommodation by example. In a survey of accommodation issues confronted by recipients of DHEW funds, LJA determined a number of factors which may influence accommodation decisions. LJA accumulated data to determine the frequency with which these factors are involved and their relationship to accommodation determinations. The factors included nature and cost of accommodation, the type of disability accommodated, the occupational group most often provided accommodations, and the type of recipient organization most likely to provide accommodations.

The Office for Personnel Management has developed the first in a series of booklets[2] explaining reasonable accommodation to employers in Federal agencies who are mandated under Section 501 of the Rehabilitation Act to provide accommodations. The handbook defines the purpose of providing accommodations, defines categories of types of accommodations and gives illustrative examples of accommodation which have been made for handicapped employees of the Federal government.

Similar to the LJA study, the OPM handbook details some factors to be considered in determining the nature and value of a particular accommodation. These include:

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[1]Lawrence Johnson and Associates, Inc. for the Office of Civil Rights, Department of Education. Reasonable Accommodations: Research and Remedies. Policy Analysis Report. 1980. Conditions and decision factors within non-profit/publicly funded organizations are expected to differ substantially from those facing government contractors.

[2]U.S. Office of Personnel Management. "Handbook of Reasonable Accommodation." Washington, PMS Series 720-A, 1980.

- Is the accommodation necessary for the performance of the duties?
- What effect will the accommodation have on an agency's operation and on the employee's performance?
- To what extent does the accommodation compensate for the handicapped person's limitations?
- Will the accommodation give the person the opportunity to function, participate, or compete on a more equal basis with co-workers?
- Would the accommodation benefit others (nonhandicapped as well as other handicapped individuals)?
- Are there alternatives which would accomplish the same purpose?

The evolution of the concept of reasonable accommodation, clearly, has reached a level of useful definition. This study contributes to an understanding of the concept by providing examples of accommodations that companies have deemed reasonable and by exploring further the issue of how "reasonableness" might be determined.

EVOLUTION OF STUDY DESIGN

In order to evaluate current policy and provide the data needed for future policy and program determinations, the U.S. Department of Labor contracted in November 1980 with Berkeley Planning Associates (BPA), with Harold Russell Associates (HRA) as subcontractor, to study the nature, extent, and costs of accommodations provided by federal contractors to handicapped employees. DOL's initial request was for reliable statistical data from a representative national sample of firms regarding accommodations that had been made. BPA's response was that, while attempting to obtain the statistical information desired, DOL should consider (1) the difficulty of obtaining detailed information on a voluntary basis from firms, (2) the probability, based on earlier study findings by BPA for OS/ASPE in DHHS[1] that many firms would simply lack information of the kind desired, that biases would exist in data on certain groups even if proferred by industry

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[1] Berkeley Planning Associates, Analysis of Policies of Private Employers Toward the Disabled, for DHHS, Contract #HEW-100-79-0180, November 1981.

(e.g., the formerly emotionally disturbed), and that multiple validation approaches were needed; and (3) the desirability of more descriptive information about how and why accommodation efforts are made. BPA thus expanded the scope of the study in the initial proposal somewhat to include the gathering of more qualitative information through follow-up interviews. These were seen both as ways of validating the information gained during the basic survey and as sources of information on accommodation processes and decision factors. This would permit a more valid assessment of contractors' attitudes toward reaonsable accommodation than could be gained in questionnaire responses. Still, the major goal of the study was to assist the Office of Federal Contract Compliance Programs in developing realistic and equitable policies in regard to Section 503 of the Rehabilitation Act of 1973.

This study consisted of five major elements: an initial design phase, a survey of 2,000 federal contractors nationwide, telephone discussions with 85 companies, a survey of disabled workers in several of those companies, and on-site case studies of ten large corporations. Three-hundred-and-sixty-seven responses to the company questionnaire have been analyzed. This response represents firms employing a minimum of 512,000 workers, of whom at least 19,200 were known to be handicapped.

LESSONS LEARNED DURING THE DESIGN PHASE

Through continued close contact both with the Project Officer and with members of the Industry Advisory Panel, project staff learned important lessons about the most realistic focus of this study. First, the message from industry representatives was clear that certain types of statistical information about employees cannot be obtained in a survey where responses are voluntary. Second, continuing discussions with those representatives and with DOL officials yielded the conclusion that the study had potential for a wider range of uses than initially foreseen. The audience for the final report could consist not only of OFCCP's enforcement-related officials, but also officials responsible for drafting proposed amendments to the Section 503 regulations, officials who might be instrumental in mounting a technical assistance effort for federal contractors, and persons within the business community itself.

This process of observation and information gathering brought about some subtle shifting of the study's focus away from gathering information useful for enforcement purposes toward overall examination of policy. One foreseen consequence of the shift in public opinion during recent years is that the federal government is expected to relinquish some of the responsibilities it had assumed during previous decades, allowing the private business and voluntary sectors to assume some of these functions. One such area of decreasing federal involvement will be the provision of training and employment opportunities for persons who have experienced difficulty finding and holding jobs. Examples of this trend as it relates to handicapped persons include (1) the federally initiated Project Partnership, which links business, government, and community organizations working with handicapped individuals, and (2) the increasing reliance of Projects with Industry (PWI) which emphasizes the leadership role of business in developing training and placement programs for handicapped persons.

To effect an orderly transition of responsibilities, the federal government must study carefully the effects of the laws and policies now in effect, together with the economic and other incentives for industry to assume a leadership role in helping handicapped persons toward productive employment.

An effort to learn more about reasonable accommodation is a key element in the success of this transition. By learning from business executives what levels and types of accommodations they have found to be cost-effective, and by studying in detail the processes and technologies that have proved successful from firms' point of view, the Department of Labor can equip itself to assume an effective role in providing guidance and technical assistance in this area. This role of assisting firms to comply can productively supplement DOL's traditional enforcement role. To the extent that increased enforcement of current regulations is deemed advisable, the findings of the present study will provide valuable information about current industry practices and can aid in carrying out enforcement activities in a way that is grounded in economic reality.

PRELIMINARY OBSERVATIONS

There are a number of perspectives or understandings which the study has emphasized that are so fundamental that they form a background or a

context in which all the others must be understood. Although they will be reiterated and expanded upon in more detail in later sections, it is important to discuss them initially, as they consitute some of the overall themes of the study.

First, at the risk of belaboring the obvious, some definitions are essential. Thus it is important to understand the difference between a disability and a handicap. A disability does not require accommodation unless associated with it is a handicap, namely a limitation in the ability to perform a given work-related task (including the "task" of securing employment). Since this study focuses on accommodations, the population of primary interest here is the handicapped, those with work-limitations. However, many disabled individuals with no substantial work-related limitations may be considered handicapped by prospective employers or may be rendered handicapped by the presence of physical barriers. All disabled are protected under non-discrimination and affirmative action laws whether their disability limits their ability to work or not, whether an accommodation can remove their work handicap or not. Thus, both of the terms "handicapped" and "disabled" appear in the text but not because of a lack of awareness of the distinction.

Another distinction that must be made is that between equal employment opportunity and affirmative action. EEO implies non-discrimination, equal treatment of individuals regardless of whether or not they belong to a group protected by civil rights legislation. Affirmative action includes the additional obligation to seek out opportunities to hire members of these groups, to integrate them fully into the workforce, and to facilitate their upward mobility.

The biggest barriers to increased hiring and accommodation of handicapped workers are psychological. There is a natural tendency on the part of most non-handicapped individuals to avoid dealing directly with severely disabled persons. The majority are still uncomfortable with handicaps; not having close friends or relatives who have severe handicaps, they do not know how to interact with handicapped individuals or what to expect from them. The result is a lack of knowledge about what is needed for a particular disabled person to be able to do a particular task, together with a limited imagination when it comes to working out ways to make tasks

easier. The best solution to these barriers is exposure, experience working with individuals with a range of disabilities. Indeed, one study finding was that success with previous accommodations is a major factor inducing managers to undertake additional accommodation.

It is difficult to discuss accommodations generically. As each person's capabilities are different, handicapped or not, each disability has different effects. In fact the same disability may have different effects on the work abilities of two different persons, depending on such intangible factors as personality, age of onset of the disability, upbringing, and the types of general "coping" skills the persons have acquired. The number of relevant variables is enormous. The ability of a company or an individual manager to facilitate an accommodation successfully is dependent on the flexibility to deal with individual instances of accommodation on a case-by-case basis.

Therefore, the goal of this study should not be the creation of a list specifying "given X disability and Y job, Z accommodation would be appropriate." Such a list could never cover all possible cases, and would limit the imagination of persons seeking to remove or minimize work-related barriers for disabled individuals. Rather, by showing how some companies have approached and implemented accommodations and by illustrating a few individual instances of accommodation, the study may assist companies in implementing accommodation practices by:

- showing some of the types of actions that other companies have found to be in their own best interest;
- showing some of the ways in which -- and the reasons for which -- accommodations have benefitted companies;
- showing, again by example, what can be done; and what some of the useful ways of thinking about accommodations have been; and
- giving examples of the types of assistance available to companies in recruiting and working with handicapped employees.

Willingness to hire is a prerequisite for accommodation. Although it is possible to make accommodations during the application process -- e.g., to administer a written test orally for a blind person, to provide an interpreter for an interview with a deaf applicant -- these presuppose a willingness to hire the applicant if he or she is qualified for the job in

question. Indeed, there are a number of disabilities and individuals that require only one form of accommodation: the willingness to hire the individual. A number of "hidden disabilities" -- some forms of epilepsy, a history of heart disease, cancer or emotional disorders, and alcoholism, to name a few -- may involve no work-related limitations, but involve a risk that the individual may become incapacitated in the future.

During the course of the study, BPA staff found that company representatives had some difficulty discussing accommodation issues separately from related issues of hiring, working with, and evaluating handicapped workers.[1] This was evident in a number of the additional comments offered by respondents and non-respondents alike.

> Hiring the handicapped was such a commonplace occurrence that we never took special note of any of the accommodations which were being made. We therefore have never instituted a system for gathering the information you require. We must respectfully decline to take part in your survey.

Accommodation of handicapped workers is a topic that has not been of special concern to most company officials. Accommodation of handicapped workers is seen as rarely needed, but as something which is usually simply, inexpensively, and routinely done. Many equate the "accommodation" concern of federal regulations with facilities accessibility; many think only in terms of expensive equipment purchase or dramatic job restructuring; many do not give separate consideration to accommodation decisions, but see accommodation rather as the natural consequence of the decision to hire or to retain a handicapped worker.

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[1] In fact, project staff felt that some company representatives did not understand the purpose of the study, or that they did not consider accommodation by itself to be of sufficient interest to warrant the time it would take to complete the company questionnaire. A study of affirmative action for handicapped workers, which included a focus on accommodation issues, might have elicited a higher response from firms.

Because accommodation practices are invariably associated with a number of other practices aimed at employing and assisting handicapped workers, it is often useful to talk about them within the full context of affirmative action efforts for handicapped individuals.

It is particularly important to realize that affirmative action for handicapped workers is a relatively young phenomenon. The data and observations presented herein clearly show a start-up process, with a great deal of variation among firms in their ability to make it work well. Officials in many firms still think that they cannot attain significant progress in hiring and working with handicapped workers, because of the nature of their company's work or workplace. Some firms with very good intentions have still not been able to integrate handicapped workers fully into their workforce. Many firms do not frequently encounter qualified handicapped applicants and do not really know where or how to find them. Other firms have achieved remarkable successes. Even those firms are still working to improve their practices in many respects. The integration of the disabled (with and without work handicaps) into the workforce is a process requiring attitude changes that will take many years to accomplish fully.

USES OF THE INFORMATION

Based on discussions with DOL officials throughout the study, BPA and HRA staff anticipate that the information presented in this report will be useful in ways such as the following:

- as information for Equal Opportunity Specialists within the Office of Federal Contract Compliance Programs (OFCPP) illustrating (though not limiting) what constitutes "reasonable" accommodation, based on what firms themselves have considered reasonable and beneficial;
- guidelines to be used by agency personnel in proposing regulations or amendments to current legislation in order to determine:
  - -- the degree to which accommodation is a central need of employed handicapped person,
  - -- the degree to which law and regulations can be expected to increase the employment of qualified handicapped persons;

- guidelines to be used by agency personnel in proposing other federal policy changes, such as increasing tax credits or other incentives for accommodation, establishing training programs for handicapped persons, or increasing technical assistance capabilities;
- information to be provided for firms in a form they can use to facilitate their own decisions regarding accommodations, specifically:
  - -- technologies and processes that have proved particularly successful from firms' point of view (i.e., cost-beneficial);
  - -- types of jobs, workers, and accommodations that have been combined with particular success;
  - -- examples of low- and no-cost accommodations that have been identified as effective substitutes for extensive remodeling or large-scale equipment installation;
  - -- guidelines as to costs and other factors as they relate to "undue hardship" or "business necessity";
  - -- ways in which other employers' experiences with handicapped employees have affected their accommodation decisions;
- training of OFCCP personnel to enable them to provide more extensive technical assistance to firms as to accommodation processes, technologies, and costs;
- evaluation of the effectiveness and impacts of current law and policy; and
- sharing of information with other agencies and departments which have an impact on the training and employment of handicapped persons.

In short, the Department of Labor expects the information that results from this data gathering effort to be a useful tool enabling the agency to encourage and facilitate the employment of qualified handicapped persons, and to assist them, once employed, in becoming more productive. BPA hopes that this report will be an effective vehicle for beginning to achieve DOL's various goals for use of information.

II. DISCUSSION OF FINDINGS

In this chapter, the overall findings of the study are presented. Here are highlighted the general patterns of accommodation and related employment practices in industry. The various components of this study have produced data and findings consistent from one component to the next, increasing confidence in the validity of the findings. Review of the tentative findings with industry representatives who were part of the Advisory Panel that provided valuable critique during the design of the study has provided further validation; those representatives have judged the findings consistent with their firms' experiences.

It is important first to acknowledge the possible distortions that could be created by the 20% response rate to the mail survey. While this response rate is comparable to the response rate experienced by other federally-commissioned voluntary mail surveys of industry, it is possible that a bias may exist whereby firms that rarely provide accommodations or hire disabled workers might have had a lower probability of sending back the completed survey forms. In this situation, an estimate of the frequency of accommodation based on the survey could overstate actual industry rates of accommodation. However, nonresponse was probed at length. BPA found no major difference in response rate by size of firm (total number of employees) or by the corporate organizational form of the firm receiving the survey (i.e., single establishment versus subsidiary of larger corporation or a corporate headquarters). There was a slight tendency for the response rate to be higher for service and finance firms (measured by SIC codes) than among manufacturing firms, but not enough to create major distortions. Thus, 67% of the respondent firms were in manufacturing as compared to 75% of the initial sample. Most importantly, however, a special phone survey of non-respondent firms found little evidence that wariness of divulging limited accommodation practices was an important factor in nonresponse. Rather, firms didn't want to take the time, or lacked easy access to the needed information about the accommodations they had done. (See Attachment II for an extended analysis of nonresponse). Half of the firms in the

nonresponse follow-up reported having disabled workers or having done accommodation -- a rate nearly comparable to that reported among the firms responding to the mail survey. The fact that so many firms responded which had not undertaken accommodation again lends confidence to the belief that nonresponse has not created a major bias in the reported frequencies of accommodation. The reliability of the data collected even from responding firms was limited by these firms' lack of information about the size of their handicapped workforce. The following sample comments illustrate employers' difficulty in arriving at an accurate estimate of the number of handicapped workers:

> Because there is no requirement to maintain any statistics on handicapped individuals, we are unable to provide any data as such.
>
> We have experienced reluctance from handicapped individuals to identify themselves or to request accommodations.
>
> We are certain there are currently unidentified handicapped employees. We are developing a computer program which will better allow us to monitor our company's progress with handicapped hiring.

Thus, the findings of this study may systematically underreport the actual hiring and accommodation of handicapped workers.

PREVALENCE OF HANDICAPPED WORKERS

Before examining the data on accommodations among the responding firms, it is useful to analyze the general prevalence of handicapped workers in the work force. Some 3.5% of the 512,000 employees across all firms were reported as being disabled. The average firm, however, reported that 2.5% of their labor force were disabled. The discrepancy in the rates simply reflects that larger firms tend to report a higher proportion of their work force as disabled. Thus, 16% of the firms with more than 200 employees reported that more than 5% of their work force was disabled, in contrast to only 9% of firms with fewer than 200 employees (See Table 1). Once the 200-worker threshold is reached, a roughly comparable percentage of firms in each increasing size class report that more than 5% of their employees are disabled. This pattern occurs for

Table 1

Percent of Employees Reported as Handicapped, Categorized by Firm Size[a]

Percent of Employees Reported as Handicapped	Number of Employees in Firm, 1981						Total Firms in Each % Category	
	Less Than 200		200-999		1000 and Over			
	Number	Percent[b]	Number	Percent[b]	Number	Percent[b]	Number	Percent
Zero	54	50.9%	24	18.0%	25	19.7%	103	28.1%
0.1%-2.9%	23	21.7	61	45.9	59	46.5	143	39.1
3.0%-5.0%	19	17.9	26	19.5	23	18.1	68	18.6
Over 5.0%	10	9.4	22	16.5	20	15.7	52	14.2
Total Firms in Each Size Category	106	29.0	133	36.3	127	34.7	366	100.0

[a]Source: Company Questionnaire responses (one missing observation)

[b]Column percents add to approximately 100% (rounding errors)

several reasons. First, large firms have relatively frequent opportunities to hire disabled workers because of the large number of jobs. Second, they normally have affirmative action mechanisms in place for working with minorities and women. These can be utilized or expanded to focus on handicapped workers as well. Finally, large firms have reliable ways of counting handicapped workers. Doctors or medical departments are responsible for documenting work limitations and medical restrictions. Thus centralized records of disabilities are kept, and sometimes even computerized and reported internally. The population covered is normally much larger than the set of workers requiring accommodation. Small firms, by contrast, have few job openings and thus few opportunities to hire handicapped persons. Their only contact with disability may be when an existing employee becomes handicapped and, as a matter of course, receives an accommodation. Thus, these firms may report that most or all of their handicapped employees have been accommodated.

There remains great variation across firms even within size classes, however, in terms of the prevalence of disabled workers. Overall, 28% of the responding firms reported having no disabled workers, 67% reported having fewer than 3% of their employees who are disabled, and only 14% reported having more than 5% of their employees who are disabled.

PREVALENCE OF ACCOMMODATION

While more than two-thirds of firms do employ some disabled workers, it is the minority of firms which report providing accommodations. Of the firms which reported disabled workers among their employees, one-third have accommodated fewer than 10% of their handicapped workers, with 23% reporting no accommodations at all. However, 38% reported accommodating more than 75% of their disabled employees. Since, as noted above, 28% of firms report no handicapped employees, this means that, overall, 51% of firms report no disabled workers receiving accommodations. (See Table 2.) A more significant measure of total accommodation activity is the proportion of firms' total workforce that are accommodated handicapped workers. This is shown in Table 3. More than three-fourths of firms have accommodated fewer than one percent of their workers, with 37% of firms reporting no accommodations.

Table 2

Percent of Handicapped Employees for Whom Accommodations Were Made[a]

Percent Category	Frequency of Response		
	Number of Firms	Percent	As a Percent of firms with Handicapped Workers
Zero	62	16.9%	23.3%
1-10	29	7.9	10.9
11-25	28	7.6	10.6
26-50	33	9.0	12.5
51-75	12	3.3	4.5
76-100	101	27.5	38.1
No handicapped employees or number not provided	102	27.8	
TOTAL	367	100.0	99.9

[a]Source: Company Questionnaire responses

Table 3

Percent of Total Workers for Whom Accommocations Were Made[a]

Percent Category	Frequency of Response	
	Number	Percent
Zero	129	37.0
.01-1	140	40.1
1.01-4	58	16.9
Over 4	21	6.0
Total for which the number of employees was reported	349	100.0

[a]Source: Company Questionnaire responses

However, there again is a tendency for larger firms not only to have more handicapped workers, but also more often to provide accommodation. Nearly one-fourth (22%) of all the handicapped workers across all firms responding in the survey were reported as receiving some form of accommodation. Thus, accommodation is not the typical experience of firms (because so many firms lack handicapped workers). It is the experience of many handicapped workers in industry, though many more have not needed or have not received accommodations.

Moreover, interview findings indicate that the general mail survey of firms on which the above data is based is probably underreporting the accommodations that have occurred. The more detailed discussions with firms and workers in the phone interviews revealed more types of accommodation than firms recorded on the mail survey, and the on-site interviews in the ten case studies found still further accommodations. Interviews with workers during the case studies clearly indicated that workers often did not perceive very obvious accommodations which were being made for them. On the other hand, the worker survey also revealed that workers also perceived accommodations which management had not apparently recognized.

This problem in getting accurate reports on accommodation is the result of the fact that firms do not routinely record accommodations or even information about the number of disabled workers within company files. Even in the firms with exemplary accommodation practices, surveyed by phone, only 32% kept any formal records on accommodation. This lack of systematic record-keeping has ready justification, since, as shall be shown, accommodations rarely involve great expense or extensive decision-making efforts. But the lack of systematic information makes definitive estimates of the prevalence of accommodation difficult. What must be emphasized, however, is that all our evidence from the various corroborative surveys points in the same direction; that is, that the bias in the survey is for underreporting of accommodations actually made. This means that more firms are probably providing accommodations than in fact reported them, that the firms that did report some accommodations are probably providing them for more workers than central management recognizes, and that the typical worker is probably receiving more types of accommodation than management or the worker is reporting.

It is also hard to estimate the extent to which accommodations are needed, and thus to determine how much of the need is being met. Most firms receiving phone interviews and on-site visits clearly perceived that they were responding, or had responded, to most of the accommodation needs of their workers. The workers whose accommodations were being investigated in the on-site cases tended to give corroborative reports. In the worker surveys gathered from 22 of the firms with the most exemplary accommodation practice, only 21% of responding disabled workers reported further needs for accommodation with half of these indicating that management had not responded favorably when the accommodation was proposed by the worker. It might be anticipated that the unmet needs for accommodation would be lowest in these firms with exemplary practice, so that the 10%-20% crude estimate of unmet demand for accommodation among existing disabled workers would be a minimum figure for industry as a whole. It must be emphasized, however, that we only probed worker desires for further accommodation; no attempt was made to judge whether the desires were reasonable and thus whether there was really unmet need for accommodation. On the other hand, the level of unmet demand is fairly low and consistent with firms' general perception that they meet most accommodation needs.

What this study was unable to examine, of course, is what the accommodation needs may be of those disabled who are not hired. The strong belief among managers and EEO officers in firms is that once it is determined that a job applicant has the skill to do the job, accommodation normally follows if there is a need for it. Rarely were there reports, even amidst great candor, of applicants rejected for hire because accommodation would have been too expensive or difficult. But the study design provided no means of validating these reports by firms. And, since interview respondents represented those firms with the most exemplary accommodation practice, it might be anticipated that such firms would be less likely to let the difficulty of accommodation block the hiring of a qualified disabled applicant. The nature of experience in other firms cannot be projected with any confidence. A study of the accommodation needs of job applicants and the disabled worker having difficulty entering the labor force requires a separate and very different study design than the current study with its focus on workers currently employed in industry.

TYPES OF ACCOMMODATION PROVIDED

The study found that a broad range of accommodations for individual workers are provided. Though we used 16 broad categories for types of accommodation, 8.9% of the reported accommodation still fell into the general "other" category (see Table 4 for detailed accommodation categories). If the types of accommodation are roughly grouped into broad categories, one still finds that no single approach to accommodation is predominant. Thus, adaptations of the work environment and location[1] accounted for 21.0% of all reported accommodations, while the provision of special equipment[2] and assistance accounted for 15.2%. Accommodations involving job modification[3] comprised 22.9% of accommodations, training and transfer[4] accounted for an additional 13.9%, and orientation[5] accommodations were 18% of the total. If the orientation and job modification are combined to form a measure of the firms' "adaptive" accommodations, these efforts comprised 34.5% of all accommodations, the most common strategy

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[1]This category of environmental accommodations included the following types of accommodation: removed barriers, adjusted work environment, adjusted table/desk, other rearrangements, relocated worksite.

[2]This category of equipment and assistance accommodation included: modified telephone, typewriter, etc., provided audio-visual aids such as microfilm or dictaphone, provided other special equipment, tools or devices, provided transportation or other mobility assistance, and assigned aides, reader, etc. These are accommodations which enable an employee to perform the assigned job functions by providing "something extra."

[3]This category of job modification accommodation included: reassigned tasks, modified work hours, and other modifications of work procedure.

[4]This category of training and transfer included: provided additional training and transferred employee to another job. These are grouped together because they are both one-time efforts which may make further accommodation unnecessary by minimizing the work limitations imposed by the disability. They both involve adjustments on the part of the individual accommodated worker.

[5]This category of orientation consisted of orienting coworkers and supervisors to provide special assistance. This was the single most frequently cited form of accommodation. Though it happens in a variety of ways, both formal and informal, it basically involves special consideration or efforts on the part of other individuals in the work situation.

Table 4

Types of Accommodations Provided

Accommodation Types	Frequency of Response	
	Number	Percent
Removing architectural barrier for individual	114	5.7%
Adjusting the work environment (heat, light, ventilation)	56	2.8
Adjusting table, desk, bench, etc.	128	6.4
Other rearrangement of worksite	93	4.6
Relocating worksite	31	1.5
Modifying telephone, typewriter, etc.	57	2.8
Providing microfilm, dictaphone, audio-visual aids	23	1.1
Providing other special equipment, tools, or devices	95	4.7
Providing transporation or other mobility assistance while on job	65	3.2
Assigning tasks to other workers	177	8.8
Modifying work hours or schedules	104	5.2
Other modification of work procedures	179	8.9
Assigning aides, readers, etc.	64	3.2
Providing additional training	104	5.2
Orienting supervisors and coworkers to provide necessary assistance	362	18.0
Transferring employee to another job	175	8.7
Other	179	8.9

employed by firms. Even so, there is no typical pattern of accommodations provided to handicapped workers, even when divided according to disability groups. The types of accommodations provided to persons with different disabilities are shown in Table 5. It should be noted that most disabled workers receive more than one type of accommodation and that many workers have multiple disabilities.[1] Thus, such seeming anomalies as removing architectural barriers or providing mobility assistance to a deaf individual are found. In Table 5, the expected tendencies emerge: barrier removals for persons using wheelchairs were frequent, as were telephone and other equipment modifications for hearing-impaired persons and interpreters for deaf persons. Additional training was frequently provided for mentally retarded individuals. Orientation of supervisors and coworkers was done in response to a number of limitations, particularly mental retardation, deafness, impaired speech, and impaired vision. Other procedural adjustments were often made for blind and visually impaired persons, as well as for workers with respiratory and mobility impairments.

The case study visits to firms offered the opportunity to examine accommodations from a number of perspectives: top management, EEO officials, supervisors, and workers themselves. It was evident from talking to a number of persons about a single disabled worker that perceptions of what accommodations had actually been provided differed among these individuals. Occasionally workers were not aware of accommodations that had, in fact, been made. Examples of this were mildly mentally retarded individuals for whom simple procedural accommodations had been made. More frequently, workers or supervisors reported informal arrangements and adjustments made at the worksite of which managers and EEO officials had not been aware. Since these adjustments involved no cost or formal decision, they remain

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[1] This creates a general complexity for analysis. One can analyze the data using as alternative units of analysis the accommodated worker, the type of accommodation, the firm, or a worker having a particular kind of disability. Since each worker often has multiple disabilities and usually receives several accommodations, the same worker will be counted several times in analyses by disability group or by accommodation. It is thus important in reading the discussion in the text or in examining tables to keep in mind the multiple categories to which a given person may be assigned. The researchers did not distinguish, for a deaf-blind person, between the accommodations provided because of deafness and those provided because of blindness.

Table 5

Handicapping Condition of Accommodated Employees by Type of Accommodation[a]

Handicapping[b] Condition	Percent of Accommodated Employees Who Received:[c]																Total Handicaps and Accommodation Types Reported	
	Removed Barrier	Adjusted Work Environment	Adjusted Table, Desk	Other Rearrangement	Relocated Worksite	Modified Phone, Typewriter	Microfilm, Dictaphone	Other Special Equipment	Job Transportation or Mobility	Reassigned Tasks	Modified Work Hours	Other Modification of Work Procedure	Assigned Aides, Reader	Additional Training	Oriented Coworkers, Supervisors	Transferred to Another Job	Other Accommodation	Number	Percent
Wheelchair User	56.1%	7.0%	42.1%	23.7%	3.5%	6.1%	1.8%	10.5%	14.9%	7.0%	7.0%	3.5%	2.6%	5.3%	19.3%	1.8%	13.2%	114	8.6%
Other Walking Limitations	15.5	7.8	18.7	12.3	4.6	.9	.5	6.8	12.8	16.4	9.6	21.9	0	3.2	19.6	8.7	12.8	219	16.5
Total Blindness	15.4	5.8	11.5	9.6	5.8	0	21.2	28.8	26.9	15.4	17.3	25.0	28.8	21.2	9.6	5.8	9.6	52	3.9
Other Impaired Vision	1.4	14.1	5.6	4.2	2.8	1.4	4.2	8.5	1.4	14.1	1.4	22.5	1.4	15.5	45.1	14.1	11.3	71	5.3
Deaf	1.4	1.4	3.5	4.9	.7	13.9	4.2	9.7	.7	18.1	1.4	9.7	25.0	20.8	48.6	4.9	25.7	144	10.8
Other Impaired Hearing	1.9	1.9	1.9	1.9	1.9	48.1	0	14.8	0	9.3	0	11.1	5.6	7.4	31.5	5.6	3.7	54	4.1
Limited Use of Arms	7.7	2.8	20.3	11.9	3.5	4.2	2.1	16.8	6.3	16.8	8.4	14.7	.7	8.4	25.9	28.0	6.3	143	10.8
Impaired Speech	1.9	1.9	9.4	9.4	0	11.3	5.7	11.3	7.5	15.1	5.7	15.1	15.1	18.9	67.9	9.4	9.4	53	4.0
Cosmetic or Skin	0	4.5	4.5	4.5	0	4.5	0	9.1	4.5	13.6	9.1	9.1	0	0	9.1	36.4	9.1	22	1.7
Mental Retardation	0	4.8	0	2.4	9.5	0	0	0	0	19.0	9.5	16.7	0	31.0	66.7	9.5	14.3	42	3.2
Other Mental or Emotional	1.8	0	3.5	5.3	1.8	0	0	1.8	1.8	22.8	15.8	15.8	3.5	14.0	47.4	21.1	14.0	57	4.3
Respiratory Condition	2.2	10.9	6.5	10.9	4.3	0	0	4.3	4.3	21.7	8.7	21.7	0	0	28.3	39.1	2.2	46	3.5
Limitation of Activity	1.9	2.8	3.3	1.9	1.4	.9	.5	2.3	1.4	16.8	16.8	15.0	1.0	0	27.6	19.2	15.9	214	16.1
Other Condition	4.1	1.4	8.2	1.4	1.4	0	0	4.1	1.4	9.6	9.6	11.0	1.4	1.4	30.1	17.8	37.0	73	5.5
Condition Progressive	16.0	8.0	8.0	16.0	8.0	4.0	4.0	12.0	12.0	16.0	20.0	12.0	4.0	12.0	32.0	20.0	0	25	1.9
Total																		1329	100.0%

[a]Source: Company questionnaire responses

[b]Where multiple handicaps exist, they are counted separately

[c]Percentages are of the total number of accommodated persons with a given disability. Percentages may add across rows to more than 100% because many individuals received multiple accommodations

undocumented. These were no different from adjustments routinely made for nondisabled workers in response to preferences or work habits. They were identified as special -- as accommodations -- only because they occurred in response to a physical or mental impairment.

In addition to individual worker accommodations, the study also probed the overall accessibility of the firm's physical plant. The survey revealed impressive improvements in the physical accessibility of contractors' overall plant. As shown in Table 6, 72% of all firms reported parking or curb cuts, 64% had ramped exterior entrances, 67% had widened doorways, 49% had elevators, 62% had bathroom access, 67% had clear access to offices where applications would be filed, and 62% had general access throughout the whole plant. With more refined indicators of barrier-free design, the reports were also positive: 40% of the firms had audible and visual alarm systems, 13% had braille markings, 31% had lowered fountains, and 29% had lowered phones.

In each case, the percentages represent the proportion of total respondents reporting that the building was already accessible, or that the firm itself made the modification. Other firms indicated in comments that they did not report modifications that they had made because they did not know the details. Still others stated that they were in rented space, and thus had no control over accessibility. As a result, the number of firms failing to make accessibility improvements is smaller than these figures indicate, as illustrated by the percentage of firms which state that they did not make a particular modification. (See Table III-1 in Attachment III.) Thus, only 20% of firms acknowledge the lack of ramped exterior entrances, 28% lack of curb cuts or special parking, 23% lack of widened doorways, 41% lack of elevators, 26% lack of access to bathrooms, 24% lack of access to personnel and other offices, and 13%-20% lack of the more "specialized" modifications.

As stated above, many plants were already barrier-free; thus the percentages cited overstate the actual efforts on firms' part. Table III-2 in Attachment III shows the separation between modifications actually made and those already in existence. Althogether, some 24% of firms report making four or more different types of modifications (see Table III-3).

Table 6

Accessibility Modifications

Type of Modification	Already Existed or Installed by Company		Not Needed, Infeasible, or No Response	
	Number	Percent	Number	Percent
Special parking, curb cuts	263	71.7%	104	28.3%
Ramped exterior entrance	233	63.5	134	36.5
Wide, easily opened doorways	246	67.0	121	33.0
Elevator	178	48.5	189	51.5
Audible/visible alarms	148	40.3	219	59.7
Braille or raised markings	48	13.1	319	86.9
Lowered public telephones	108	29.4	259	70.6
Lowered drinking fountains	112	30.5	255	69.5
Access to bathrooms	229	62.4	138	37.6
Access to personnel, other offices	245	66.8	122	33.2
Access to general use areas	226	61.6	141	38.4
Other modifications	32	8.7	335	91.3

The timing of the modifications (shown in Table III-4) indicates that all but 10% were made since the passage of the Rehabilitation Act. In fact, nearly half of the modifications were made in the three years just prior to this study. The costs of these modifications varied enormously. For instance, the cost of special parking and curb cuts ranged from zero to thousands of dollars. Firms reported spending between zero and $25,000 on access to the personnel and other offices. On average, 41% of all modifications were reported as costing less than $1,000.

ACCOMMODATION COSTS

Are inexpensive accommodations more likely to be provided than expensive ones? Are the most frequent accommodations those with no direct dollar cost? A striking finding of this study was that accommodations rarely involved much expense (Table 6a). Thus, no cost was involved for 51% of the accommodations reported, and an additional 30% of all workers received packages of accommodations for which the total cost was between $1 and $500. The fear that accommodation is expensive is not supported by the data. Only 8% of accommodated workers received packages of accommodation with a total cost exceeding even the low figure of $2,000. And, as shall be noted in a subsequent section, firms predominantly report that benefits exceeded the costs of the accommodations made.

Table 7 shows specific accommodation types categorized by cost groups. In examining this table, it is important to realize that the cost levels are not the costs of the particular accommodation in question, but rather the costs of all accommodations provided to each worker receiving that particular accommodation. In the initial design of the survey, it was decided that the cost information of most interest for the study was not the expenditures for each type of accommodation, but rather how much firms were willing to spend for each worker. Thus, if an individual received both a talking terminal and mobility assistance, the combined cost was reported by the firm, and appears in Table 7 for both types of accommodations. Because persons receiving costly equipment and building design accommodations were often the recipients of a number of accommodations, including procedural (usually costless) ones, Table 7

Table 6a

Total Cost of Accommodation to Company

Cost	Frequency of Response	
	Number	Percent
None	458	51.1%
$1-99	169	18.5
$100-499	109	11.9
$500-999	57	6.2
$1000-1999	39	4.3
$2000-4999	35	3.8
$5000-9999	9	1.0
$10,000-14,000	8	.9
$15,000-19,999	6	.7
$20,000 or more	15	1.6
Total for which cost was reported	915	100.0

Table 7

Type of Accommodation by Total Cost of All Accommodations Provided to the Worker[a]

Accommodation Type[b]	Percent of Accommodated Workers for Whom the Total Cost of All Accommodations Was:[c]										Total Accommodation Types and Costs Reported	
	Zero	$1-99	$100-499	$500-999	$1,000-1,999	$2,000-4,999	$5,000-9,999	$10,000-14,999	$15,000-19,000	$20,000 or more	Number[d]	Percent
Removed Barrier	10.8%	6.0%	30.1%	10.8%	13.3%	6.0%	2.4%	3.6%	6.0%	10.8%	83	5.6%
Adjusted Work Environment	15.9	15.9	36.4	0	11.4	11.4	6.8	2.3	0	0	44	3.0%
Adjsuted table, desk	13.8	18.4	32.2	9.2	9.2	9.2	2.3	1.1	1.1	3.4	87	5.9%
Other Rearrangement	26.7	13.3	25.0	8.3	11.7	5.0	3.3	3.3	0	3.3	60	4.0%
Relocated Worksite	58.8	5.9	11.8	0	11.8	11.8	0	0	0	0	17	1.1%
Modified Phone, Typewriter	23.3	51.2	9.3	9.3	4.7	2.3	0	0	0	0	43	2.9%
Microfilm, Dictaphone	8.3	8.3	16.7	0	16.7	8.3	8.3	0	8.3	25.0	12	0.8%
Other Special Equipment	10.0	30.0	21.4	11.4	8.6	7.1	4.3	4.3	1.4	1.4	70	4.7%
Job Transporation or Mobility	20.4	16.7	27.8	13.0	9.3	7.4	0	1.9	0	3.7	54	3.6%
Reassigned Tasks	43.4	20.9	8.5	11.6	3.9	5.4	2.3	1.6	0	2.3	129	8.7%
Modified Work Hours	52.6	5.1	20.5	5.1	7.7	5.1	0	2.6	0	1.3	78	5.2%
Other Modification of Work Procedure	49.6	20.9	12.2	4.3	5.2	4.3	.9	.9	0	1.7	115	7.7%
Assigned Aides, Reader	9.8	25.6	33.3	17.6	5.9	3.9	0	0	0	3.9	51	3.4%
Additional Training	39.3	20.2	21.3	10.1	2.2	2.2	1.1	1.1	0	2.2	89	6.0%
Oriented Coworkers, Supervisors	51.6	20.2	9.4	8.4	4.2	2.4	1.4	.7	.3	1.4	287	19.3%
Tranferrred to Another Job	57.7	21.9	5.1	3.6	5.8	3.6	0	1.5	0	.7	137	9.2%
Other Accommodation	57.3	10.7	13.7	6.9	4.6	6.1	.8	0	0	0	131	8.8%
Total											1187	100.0%

[a] Source: Company questionnaire responses.

[b] Where multiple accommodations were provided, they are listed separately.

[c] Percentages add across rows to approximately 100% (rounding errors).

[d] This is the number of accommodations of each type for which an associated cost was reported.

may show high costs associated with accommodations that are not themselves costly. Also, because firms were asked to report only their own accommodation costs, equipment or services provided by an outside agency or individual were reported as costing nothing.

The greatest costs were incurred on behalf of persons who received microfilm, dictaphone, or other audio-visual aids. Talking terminals and special projection equipment fall into this category. Architectural barrier removal and worksite adjustments were also associated with significant costs in a number of cases, as were other types of special equipment, mobility assistance, and aides or readers. The lowest costs were associated with relocating worksites, changing hours, work procedures, and task assignments, transferring the worker to a new job, and orienting supervisors and coworkers to provide necessary assistance.

Do firms generally overestimate the cost of proposed accommodations? In both telephone and on-site interviews, it became clear quickly that even in the largest corporations with sophisticated information systems, accommodations were rarely being costed in advance and never fully. The phone survey similarly found only 27% of the 85 firms making a formal cost analysis of the proposed accommodation prior to the decision to go ahead. Of these that did, most found that the actual accommodation cost less than had been anticipated. None of these firms had underestimated the accommodation cost. The mail survey indicated this in a different way. Firms were asked questions whether, in general, accommodation costs exceeded benefits, exceeded projected costs, or were prohibitive. In each case, 34%, 39%, and 22% responded "Not Sure", much higher percentages than for most of the other decision factors probed. The response pattern also did not vary depending on the extent of experience of the firms with accommodation. Some 40%-41% of firms gave the "Not Sure" response both among firms reporting no accommodations and also among those firms which reported having accommodated more than ten workers (see Table III-13). A dissenting view was offered by one respondent:

> COST - The Respondent supports the broad concept of private sector initiative and, thus, accepts reasonable attendant costs; however, the Respondent's experiences indicate the following:
>
> - Cost estimates tend to be understated and/or conservative with respect to handicap accommodation. As with this

survey, cost questions appear to be incorrectly assumed to be one-time initial costs.

- Planning and enforcing levels underestimate the initial as well as ongoing associated costs, such as:
  -- Management training
  -- Record keeping
  -- Extensive detailed and costly electronic data systems
  -- Tracking and reporting management systems
  -- Affirmative Action Plan writing and dissemination
  -- Specially trained personnel staffs
  -- Complaint administration
  -- Compliance reviews

This view may be more prevalent than the study's results indicated, depending on the candor of responses generally.

Are accommodation costs accurately estimated by firms in reporting them later? The preponderance of evidence from interviews is that the costing of accommodations by firms is misleading. Most firms did not appear to see cost as a major consideration in accommodation once they have experience in providing accommodation. Most firms look only at out-of-pocket costs in considering the costs of accommodation. The time of personnel staff, EEO officers, and of supervisors and managers in reviewing and implementing an accommodation is regarded as a normal overhead expenditure involving no expense to be assigned the accommodation. The time of plant maintenance staff who might build a ramp or raise or lower a desk is similarly treated as a normal overhead expense, as often would be the materials used if they already were in inventory. Only equipment or accommodations for which special expenses must be incurred are seen as cost-producing accommodations. This impression of the cost data was borne out by all portions of the study. The on-site case interviews provided the most in-depth look at costs and showed that the cost of accommodations is rarely tracked precisely.

IMPACTS OF ACCOMMODATIONS ON WORKERS

Does accommodation improve employees' productivity? Does it improve their chances of being promoted? Accommodations principally appear to serve to bring workers up to the company standard for productivity in a given job,

not to give them any special advantage. As shown in Table 8, only 27% of the accommodated workers reported by firms were also reported as having received a promotion since the accommodation. Only a small part of this failure to be promoted can be explained by the recency of the accommodation. However, the worker survey also supports the general finding that accommodation is not routinely a vehicle of upward career mobility in most firms. Only 19% of workers submitting forms reported earning higher incomes because of the accommodation and only 21% judged that the accommodation had improved their career potentials. Similarly, the mail survey found only 30% of firms affirming that accommodation had improved employees' promotability, flexibility within the firm, and advancement potential, with some 17% of firms actively dissenting from the claim. This pattern may indicate the need for more attention by firms, disabled workers, and their advocates to the need for accommodation if the disabled are to secure upward mobility within firms. Few of the firms that were interviewed because of their exemplary practices had any kind of routine personnel system for appraising whether accommodation might be what was needed at the next rung on the career ladder if the disabled worker were to advance within the firm. In half the cases of accommodation, the phone survey found firms reporting that the accommodation would continue to benefit the disabled employee if promoted to a new job.

Other Observations

The accommodations provided frequently had broader consequences than solely the disabled worker's performance on the job. There were also impacts on other workers. In the phone survey, 29% of the firms reported that other nondisabled workers were also benefiting from the accommodation. On the other hand, 19% of the firms reported that other workers were suffering some inconvenience as the consequence of the accommodation. In the worker survey, however, only 3% of disabled workers reported that their accommodation made the job of coworkers harder. Most reported favorable attitudes toward the accommodation on the part of coworkers. The majority stated that coworkers are also assisted by the accommodation. One employer elaborated on his firms' perceptions of the positive effects of accommodation:

> Ours is a reasonably large company which has had an active program for recruiting and placing qualified disabled

Table 8

Was Employee Promoted Since Accommodated?

Response	Frequency of Response	
	Number	Percent
Yes	321	27.0
No	650	54.6
No response	219	18.6
TOTAL	1,190	100.0

> applicants since 1960. Accommodations costs are met by individual managers and are not maintained on a corporate basis, although our feeling is that most individual accommodations (given barrier-free architecture) are not an expense item since they are more than offset by productivity increases and are often of benefit to our non-disabled employees as well. In the electronics industry we cannot affort to pass up a qualified applicant simply because they are disabled.

Overall, the phone survey found only 22% of firms stating that they had ever undertaken an unsuccessful accommodation effort. Similarly, the mail survey found only 7% of firms denying that accommodations improved productivity or asserting that costs had exceeded benefits.

FACTORS AFFECTING THE PREVALENCE OF ACCOMMODATION

There are many different factors that influence the likelihood that a firm will hire and accommodate handicapped workers or that a particular individual will be accommodated. Those factors that were cited most often as being significant can be grouped into the following areas:

- the nature of the firm, including the type of industry, size of firm, age of facilities, organizational structure, corporate philosophy, the presence of unions, and prior experience with handicapped workers and accommodation together with related perceptions and attitudes;
- the nature of the position, including the level within the firm and skill level and physical demands of the job;
- the characteristics of the worker, including qualifications, attitudes, age, nature of disability, whether new or existing employee, whether self-identified;
- external factors, such as availability of workers with needed skills, government actions, and placement efforts of outside agencies.

The issue of cost was also discussed at length, and as reflected in the survey data, was not considered by most firms to be a major factor.

Each of the above factors and the ways in which it seems to influence decisions to accommodate is discussed below. Where BPA and HRA have tested specific hyoptheses, these are noted.

Nature of the Firm

Type of Industry

Are firms that are mainly manufacturing or production oriented less likely to provide accommodations than firms in finance, insurance, and real estate or in services? About two-thirds of all responding firms were manufacturers. These firms provided more than their expected "share" of all accommodations. They provided relatively more environmental accommodations, job modifications, and job transfers than did other employers, with somewhat less activitiy, on average, in the areas of equipment, assistance and training. Manufacturing firms reported a far larger proportion of accommodated workers than did other firms, fewer multiple accommodations, but a large share of the most costly accommodations. These patterns are shown in more detail in Tables III-5, III-6, and III-7. As seen in Table 9, 65% of manufacturing firms made at least one accommodation, compared to 52-55% of other firms. One reason for this pattern is that manufacturing firms tended to be large, as shown in Table 10.

Are firms and industries which have a high turnover of employees the least likely to hire and accommodate disabled persons? Lacking systematic data on turnover in responding firms, the researchers drew conclusions from interview responses. Nine of the ten firms judged exemplary enough to be included in the on-site case study sample were notable for their lack of turnover. In these firms, a worker, once hired, becomes "part of the family." Workers do not quit; they retire. "Layoff" is not a part of their vocabularly; it has virtually never occurred. (These tend to be firms that are at the forefront of technology, in the most consistenly expanding sectors of the economy.) In such firms, the concept of investing in an employee is commonplace. Tuition reimbursement and special training opportunities are available to all employees. Accommodation in such firms is a natural part of the process of maximizing the productivity of individual workers, which is an overall long-run strategy that the company long ago made the decision to pursue. Individual accommodations receive very little management attention, because line supervisors and mid-level managers have routinely absorbed the overall operating philosophy of the company, of which accommodation is an integral part. For example, attempts to arrange

Table 9

Number of Employees for Whom Accommodations Made by SIC Code[a]

Number of Employees	SIC Code		
	2-3 (manufacturing)	6 (F.I.R.E.)	7-8 (services)
None	35.1%	44.4%	47.8%
1-4	33.5	27.8	20.9
5-9	15.1	16.7	20.9
10 or more	16.3	11.1	10.4

[a]Sources: Company Questionniare responses and employer EEO-1 reports for 1979

Table 10

Industry Type by Number of Employees[a]

	Percent of Firms Who Employ:		
	Fewer Than 200 Employees	200-999 Employees	1,000 Or More Employees
Manufacturing	55.3%	70.3%	71.6%
Finance, Insurance, and Real Estate	22.9	9.9	13.8
Services	21.9	19.9	14.6

[a]Sources: Company Questionnaire responses and employer EEO-1 reports for 1979

a smoke-free or a noise-free environment are made in response not only to medical needs, but also to employee preferences.

On the other hand, the literature shows that secondary labor market firms or those with high turnover, absenteeism, and low-skill jobs are unlikely to invest in individual workers, thus they are judged the least likely to hire and accommodate handicapped workers. They tend to structure personnel practices around the expectation that employees are temporary. They provide little in terms of fringe benefits, training, or special attention to the needs of employees. They are not likely to be large firms with extensive personnel systems, growing markets, on-board plant engineering staffs, and higher-paying jobs. Study results indicate that if such firms wished to stabilize their workforce and increase per-worker productivity, they would have much to gain from the dependability of the average handicapped worker and would be an appropriate target for increased placement and awareness training efforts.

Are workers in industries (or firms, or occupations) in which safety is a strong concern unlikely to receive accommodations relative to other workers? Certainly there are major differences among firms and industries in the level of their concern for safety. Likewise, there are differences in day-to-day risks among occupations even within a single firm, depending on the presence of heavy machinery, moving parts, fast-moving vehicles, and so forth. However, it appears from discussions with interview respondents that firms become extremely safety-conscious where there exists even a moderate number of "high-risk" jobs. Such firms tend to be concentrated in the "heavy" manufacturing industries and in some service sectors (such as where there is the need to drive a delivery truck). Therefore, a first approximation of an answer to the above question is to look again at the frequency of accommodation by industry. As stated above, manufacturing firms appear to have accommodated significantly more employees than firms in other industries, and to have made a larger number of expensive accommodations.

Company questionnaire respondents were asked two different questions about safety: Do accommodations improve safety or lower the risk of accident and injury? and, Are some worksites inherently too unsafe for accomodation to be feasible? To the former question, 48% of respondents (Table 11 answered in the affirmative, with only 8% disagreeing. Of the smaller

Table 11

Accommodation Decision Factors

Factor	Percent of Respondents Citing Statement As:							
	Definitely Accurate	Probably Accurate	Not Sure	Probably Inaccurate	Definitely Inaccurate	Not Applicable	Not Reported	Most Important Decision Factor
Accommodation has enabled firm to attract (retain) dependable, hard-working employee(s)	19	30	20	5	3	16	7	31
Accommodation has enabled firm to attract (retain) worker(s) with scarce skills	7	17	25	10	12	23	6	6
Handicapped workers have had less turnover than other workers	21	21	30	9	3	10	6	7
Handicapped workers have had better attendance and punctuality records than other workers	16	22	33	11	4	9	5	1
Accommodation has improved safety or lowered the risk of accident and injury	21	27	24	5	3	15	5	11
Accommodation has improved employee's promotability, flexibility within the firm, or advancement potential	10	20	31	10	7	16	6	2
Accommodation has improved workers' productivity	15	25	24	4	3	13	6	10
Actual benefits have exceeded actual costs for most accommodations undertaken	17	22	33	5	2	15	7	3
Accommodation has been beneficial in terms of public relations	29	35	15	3	2	11	5	2
Accommodation has been provided primarily in order to be in compliance with the law	9	19	10	17	28	11	6	11
Accommodation represents an uncertain investment where traditionally high-turnover occupations are involved	4	8	33	11	14	24	6	1
Accommodation represents an uncertain investment for a new applicant who lacks strong skills or work background	4	17	28	16	11	16	6	1
Accommodation has been discouraged by unions	*	3	11	6	32	42	6	0
Accommodation has been discouraged because of the expected reactions of co-workers	1	2	7	7	62	15	6	*
Customers' negative reaction to dealing with handicapped employees has discouraged accommodation in some jobs with public contact	1	3	10	5	49	25	7	0
Some worksites are inherently too unsafe for accommodation to be feasible	27	9	16	7	15	20	6	5
Projected costs of accommodation have often exceeded projected benefits	5	11	32	8	16	21	6	5
Actual costs of accommodation have, in fact, exceeded projected costs	3	6	36	7	18	23	7	*
The costs of accommodation have been prohibitive, even though the accommodation might be cost-beneficial in the long run	2	7	25	7	26	26	7	2

*less than 1%

sample of respondents that also reported the total number of employees, an even larger percentage of firms in each size category (see Table III-8) agreed with the statement, with large firms agreeing the most strongly. When divided by industry, service and manufacturing firms agreed more strongly than did finance, insurance, and real estate firms. (See Table III- 9.) Those firms with the smallest proportions of handicapped workers (Table III-10) agreed with the statement more strongly than did the remainder, though firms with many handicapped employees disagreed with the statement far less frequently than did other firms. Firms with more accommodation experience expressed stronger agreement than did others. (See Table III-11.)

If the other decision factor, namely the existence of worksites too unsafe for accommodation to be feasible, is taken as an indication of whether or not safety concerns deter accommodation activity, 36% of all responding firms cited agreement. This is only a slightly higher proportion than disagreed with the statement. Manufacturing and service firms, large firms, and firms with relatively frequent accommodation experience agreed more often than did the remaining firms. In other words, safety did appear to be a factor in accommodation decisions. It was cited in a positive sense (i.e., the experience or perception that accommodation improves safety) as a decisive factor more frequently than any other factor except the ability to attract dependable employees. It was cited as a deterrent more than twice as frequently as the next most important negative factor.

Of the ten firms visited for case studies, three were in industries or had types of jobs such that safety was an overall concern. In only one of these firms did managers occasionally appear reluctant to hire and accommodate handicapped workers because of safety worries. The others, and indeed most of the case study firms, appeared to welcome the opportunity to undertake accommodations in order to improve safety. Sometimes these accommodations were as simple as formalizing a "buddy system" whereby another worker was responsible for ensuring the safe evacuation of a handicapped worker in case of fire or other emergency.

Safety was also the only factor specifically mentioned in the additional comments offered by employers. It was cited both as a barrier to accommodation and an incentive to accommodate, as shown in the following example comments:

> The nature of our operation makes it prohibitive to place handicapped individuals in jobs in the plant, from a safety standpoint.
>
> All handicapped employed at this time have either had special training to overcome their disability or accommodations would have been made for safety reasons. Although we employ several handicapped at this time, none require special accommodations anymore. We work with various agencies dealing with the handicapped and we have a very strong affirmative action program.

Other observations. When there is a strong demand for the firm's products (such as when the economy overall is strong), the firm can foresee a long-term relationship with the worker and more time to recoup the costs of accommodation, and thus will be more likely to undertake accommodations in general and more expensive accommodations in particular. In such a strong market for the firm's products, the firm is also more likely to have the financial resources to undertake the accommodations. In such firms, accommodation for the disabled is less likely to be seen as something "different" from the way other workers are treated, and accommodation therefore is more prevalent.

The case studies similarly suggested -- but without a large data base to test the hypothesis -- that firms with a high proportion of technical workers are more likely to accommodate disabled workers in all occupations. In such firms, there appears to be a general practice of adapting work practices to the needs of the high-skill employees. This receptivity by management to adapting to (accommodating) a worker's needs carries over to lower-skill workers and occupations. Similarly, firms which are relatively capital-intensive and heavy users of technical equipment appear more able and willing to finance equipment and accommodations for the disabled, including lower-skilled disabled workers. In such firms, the accommodations are seen as akin to tools or equipment that might be provided any worker to increase productivity. The equipment and accommodations for the disabled also are perceived by management as relatively inexpensive in contrast to equipment provided workers in other types of firms less accustomed to assisting workers through technology.

Where the firm is bound by government requirements for affirmative action, there appears to be more willingness to undertake accommodation.

Thus, if the firm is dependent on government contracts, or if the firm has had past pressure from DOL enforcement officials, it is likely that the firm will be undertaking frequent and extensive accommodations.

Size of Firm

Are large firms more likely to have provided accommodations than small firms? Where the firm is larger in size (both by number of employees and amount of revenues), there is more diversity in jobs, more jobs likely to be opening up at any time, more financial capability to fund the rare expensive accommodation, and greater likelihood that there will exist an EEO and even a disability specialist to monitor affirmative action efforts. These factors increase the probability that a job can be found minimizing the costs of any needed accommodation, that costly accommodations can be afforded, and that there will be internal assistance and monitoring of line managers and supervisors in the accommodation decision. All of these factors tend to increase the prevalence of accommodation activity.

In general, as shown by Table 12, the larger the firm, the more accommodations they have undertaken. This finding is relatively consistent across size categories, as the largest firms have both the smallest proportion of firms that have made no accommodations and the largest proportion of firms (by a substantial margin) that have made ten or more accommodations.

It was also significant that the majority of the firms interviewed by telephone (60%) had more than 1,000 employees. All ten of the on-site case study firms employed over 5,000 employees. These two samples were of firms with the most exemplary accommodation practices.

The relationship between size and accommodation activity has a logical basis, as noted above. In addition, large firms are the most likely -- because of their sheer numbers -- to have encountered disabled workers, whether among their existing employees or as applicants. Experiences working with disabled individuals naturally led to situations in which accommodation made sense. Having found that accommodation worked and often benefited everyone involved, these firms became increasingly likely to repeat the experience.

Table 12

Number of Handicapped Employees for Whom Accommodations Made, by Total Number of Employees

Number of Accommodated Handicapped Employees	Total Number of Employees in Firm			TOTAL
	Less than 200	200-999	1000 and Over	
None	61.3%	33.8%	25.2%	28.8% (142)
1-4	26.4	41.4	21.3	30.1 (110)
5-9	7.5	17.2	22.8	16.4 (60)
10 or more	4.7	7.5	30.7	14.8 (54)
TOTAL	100.0	100.0	100.0	100.0 (366)

Age of Facilities

Physical barrier removals have been widespread in industry, but are most common in the design of new facilities. Older firms in older plants are more likely to have barriers which would be expensive and which the firm, lacking resources, has not been able to remove. Often the removal of barriers in older facilities is considered impractical. One firm in particular pointed out the complexity of accessibility-related issues. In considering installing elevators in extremely old multi-story buildings, they were concerned about the potential danger of allowing wheelchair users to work on upper floors. If a fire rendered the elevator useless, the narrow stairs could pose serious dangers during the emergency evacuation process. Instead, the firm has thus far been able to assign mobility-impaired persons to jobs or worksites in accessible areas. Thus, selective placement or task assignment to those areas of plants where building design does not create a barrier is often more feasible than barrier removal. Such practices are constrained by the overall size and diversity of jobs in the firm and may tend to pigeonhole disabled workers into particular types of jobs.

Organizational Structure

Does the existence of a centralized management structure facilitate or hinder accommodation efforts? From close observation of ten case study firms, the study has drawn conflicting evidence on this question. On one hand, it appears that, in some firms, a decentralized structure is useful in allowing the maximum possible attention to individual needs. Decisions about accommodations may be made at the local level without fuss, though a corporate EEO official is available for assistance in case problems develop. On the other hand, this same autonomous mode of operation presents difficulties when it comes to financing an expensive accommodation. The cost may loom large in the budget of a single department or division, whereas it would have appeared inconsequential from the perspective of the company as a whole. An individual manager who is convinced that the accommodation will ultimately "pay off" in increased productivity still must convince his or her next-in-line manager that the expenditure is

worthwhile. In a more centralized structure, an EEO official may have more direct influence over the accommodation decision. There may even be a central budget for costly equipment or capital expenditures that could not reasonably be financed at the department level.

If recruiting and hiring are done in a centralized way, it is easier for a single person within the employment office to monitor the flow of handicapped applicants. Such a person can take special recruiting action if it becomes apparent that few qualified handicapped applicants are presenting themselves. He or she can also follow the progress of an individual's application form, encourage a department manager to consider hiring the applicant, and if that is not fruitful, refer the applicant to another job in another department. In addition, it is easier to implement affirmative action in a centralized way, if the alternative is extensive training for a number of employment specialists, each of whom is facing particular hiring constraints. Finally, the array of types of jobs available as possibilities for a handicapped applicant is larger the more centralized the hiring function. Thus the skills and abilities of an individual applicant may be more readily matched to a job that will not require accommodation.

Corporate Philosophy

As difficult as such a variable is to quantify, it is probably the single most important determinant of accommodation prevalence and success. A corporate philosophy conducive to hiring and accommodating handicapped individuals was a hallmark of several of the case study firms. In its most general form, such a philosophy consists of the belief (and of practices consistent with it) in the importance of individual employees. This includes encouraging individual initiative in attaining objectives; recognizing workers' achievements; helping them gain a sense of satisfaction from their work; and providing them job security in return for their performance. The rationale is that workers are most productive in environments where management has adopted such operating principles. Providing accommodations for handicapped workers is a natural outgrowth of company policies such as these; it follows logically from the "helping" spirit included therein. It is a part of helping and motivating each employee to attain his or her maximum potential, which in turn benefits

the company. The commitment to training and "investing in" an employee which is a part of this philosophy was discussed above in connection with the issue of turnover. Other practices which grow out of such a management operating style are discussed later as examples of practices associated with accommodation success. They are only briefly listed here:

- a positive approach to affirmative action overall;
- careful analysis of the skills and abilities required to do each job, followed by matching those with the capabilities of the handicapped person placed in the job so that the handicap will be minimized;
- along with an emphasis on developing the capabilities of individual employees, a commitment to following through with their career development and opportunities for advancement; and
- a commitment on the part of top management to equality of opportunity for handicapped workers, together with a commitment to taking action to help them achieve that equality.

One respondent offered a statement of a company's overall attitude toward working with handicapped individuals which falls short of the ideal presented above, but is probably representative of attitudes in a large number of firms:

> We feel we have a social and moral obligation to the surrounding community to accommodate physically and mentally or emotionally handicapped individuals who have the potential to contribute to the success of our company. In most instances we have modified a job or created a job in order to accommodate handicapped persons. We are not a rehabilitation center. We are not a social welfare agency. We have no intention of becoming either one. Handicapped and non-handicapped alike must earn their keep or they will not be retained.

Presence of Unions

Does the presence of unions inhibit accommodation? Unions are neither a major obstacle to accommodations nor a major influence in bringing them about. Their role in affirmative action for the handicapped is largely a passive one, responding to the requests made by management and contributing perhaps their largest influence by the mere existence of labor contracts. While the experience of firms studied indicates that when approached by

management to approve exceptions to union rules in order to accommodate handicapped workers, unions are generally supportive. Many firms seem reluctant to approach the union about accommodation issues. One case study respondent indicated that management feels that it has a limited number of "bargaining points" at its disposal and is sometimes reluctant to "use them up" on issues that affect only a few workers.

Respondents to the company questionnaire were asked whether or not unions discourage accommodation. As shown in Table 11 on page 39, the most frequent response (42%) was "Not Applicable." Of the remainder, 61.5% answered "Definitely No" (32% of the total respondents) and an additional 19.6% indicated that this was probably not true. Only 3% of all respondents gave a "Probably Accurate" answer. In addition, many companies who strongly disagreed with the statement (in other words, companies that viewed unions as encouraging accommodation) also cited this as a decisive factor in accommodation decisions.

The aspect of labor agreements most likely to inhibit accommodation is the seniority rules. Consequently, disabled workers run the risk of being "bumped" from their jobs by more senior workers and finding themselves unable to find other appropriate placements within the firm where they have more bumping rights than nonhandicapped coworkers. This risk may make the benefits of accommodation less certain, especially in times of recession, and thus increase the likelihood that management may judge the accommodation as not worth the effort.

Are unions active in encouraging accommodations for existing employees (union members) who become disabled? Unions have on occasion worked with management to provide more protection from bumping to the accommodated worker or even, in one case, to increase the bumping rights of the accommodated worker. One example of such action by the union was described by one respondent:

> Most of our handicapped employees are placed through the provision of our Labor Agreement. When an employee has a physical disability he is evaluated by our Medical Dept. who places restrictions. With these restrictions

> in mind, this employee is placed and trained (each employee re-trained costs approximately $3,000) in a job he can physically perform. We presently have over 94 employees in this category, primarily in the operating, laborer, and service job categories.

Such adjustments tend to be made only for individuals whose disability arose while employed by the firm and not for new applicants or hires. Unions seem to be in a natural role to become advocates for handicapped workers and should perhaps be encouraged to take a more active part in encouraging affirmative action for the handicapped.

Experience with Handicapped Workers and Accommodations and Related Perceptions

This study investigated at some length the various experiential factors that influenced accommodation of handicapped workers. In the company survey, firms were asked about a number of factors frequently cited as influencing hiring and accommodation decisions affecting disabled persons. In addition to those discussed above, firms were asked about their perceptions of the productivity of handicapped workers, the reactions of coworkers and customers, public relations benefits, the importance of workers' skill levels, and a number of other factors. Responses were provided by most firms answering the survey, because the questions were easy to answer, unlike those questions requiring specific data on employees, accommodations, costs, and dates. The questions were in turn analyzed several different ways. It was hypothesized that firms with favorable perceptions about handicapped workers and accommodations would be more likely to have a large percentage of handicapped workers in their workforce and to provide accommodations. Similarly, it was speculated that those factors often cited as problems by firms not employing or accommodating handicapped workers would be the factors that have kept them from doing so, and thus appropriate targets for public policy attention.

Table 11 on page 39 presents a summary of the basic frequencies of response to the questions probing decision factors underlying accommodation. First, the survey responses strongly affirm the claims that industry perceives handicapped workers as superior. Firms far more often affirm the statements of the handicapped workers' advantages as an employee than dissent from the statements: lower turnover rates (42% affirming versus 12% dissenting)

and better attendance and punctuality records (28% affirming versus 15% dissenting). Second, accommodation is seen as good business practice. Firms view accommodation as having increased workers' productivity (50% affirming versus 7% dissenting) and as beneficial in terms of public relations (64% affirming versus 5% dissenting). Third, firms deny that accommodation is principally being motivated by the need to be in compliance with the law (28% affirming versus 45% dissenting). Fourth, a number of other factors often cited in the literature as constraints upon the hiring and accommodation of handicapped workers proved inconsequential. Almost no firms reported that the anticipated negative reactions of customers (4% affirming versus 54% dissenting) or of coworkers (3% affirming versus 69% dissenting) deter accommodations.

On the other hand, the responses indicate some impediments to accommodation. In addition to the safety factors discussed above, many firms cite the lack of skills among disabled applicants as deterring accommodation. Twenty-three percent of responding firms cite this factor, though 27% deny its importance, which is encouraging about the prospects for new hires being accommodated.

Firms were also asked to list which of the factors in Table 11 were most decisive in the accommodation decision. The most frequently cited factors were: enabling the firm to secure dependable workers (31%), improving safety (11%), compliance with the law (11%), and improving worker productivity (10%). The prevalence of the "compliance with the law" responses belies the above-reported dissent that the law has influenced behavior.

Firms' responses were analyzed according to the extent to which they had hired and accommodated handicapped workers. The most consistent finding was that firms that had hired and accommodated many handicapped workers were far more sure of their responses than were other firms; the incidence of "not applicable" and "not sure" responses was lower among the more experienced group than others. The other responses are summarized in Tables III-12 and III-13, and are discussed in the paragraphs which follow.

Do the expected reactions of coworkers sometimes act as a barrier to accommodation? While firms that have accommodated more than ten of their workers tend to affirm this more often than firms that have made fewer accommodations, they also tend to disagree more often, and to disagree more

vehemently. Again, they seem surer of their opinions. When firms are divided according to the percent of their workforce that is handicapped, the results are less consistent. Still, in all categories, over 12 times as many firms disagreed as agreed. In other words, the answer remains a resounding "no."

Do firms that have provided many accommodations have positive views about handicapped employees? Generally, firms that have made numerous accommodations are the same firms that most often cited strong agreement (68% as compared to 27% of those with few accommodations) with the statement that handicapped workers have been dependable and hard working. The other indicators of employee "quality" were somewhat less consistent, though still tending in the same direction. As accommodation activity increased, there was more frequent agreement with each of the following statements: accommodation has enabled firm to attract (retain) workers with scarce skills; handicapped workers have had less turnover than other workers; and handicapped workers have had better attendance and punctuality records than otherworkers. For each statement, there was also more frequent disagreement among firms that had provided more accommodations. In other words, these firms were more sure of their opinions, having had more experience.

Among firms that show a relatively large percentage of handicapped workers (more than 5% of their workforce), some different patterns emerge. There is less divergence between these firms and those that have hired fewer handicapped workers on their perceptions of these workers as dependable and hard working (74% compared to 60%).

The firms with the highest percentages of handicapped workers were less positive on the "low turnover" statement (46% compared to 50%) and on attendance and punctuality (42% compared to 47%) than did firms with few handicapped workers. For each of those statements, however, firms with many handicapped workers also disagreed less often than others. In other words, there was a large number of "not sure" responses to these questions, which may best be interpreted as "sometimes yes, sometimes no," among this group with relatively more experience working with handicapped employees. What may be inferred from this slight inconsistency in the data is that perhaps firms that have hired, but not accommodated, handicapped workers have had relatively less success in working with them than have firms providing numerous accommodations.

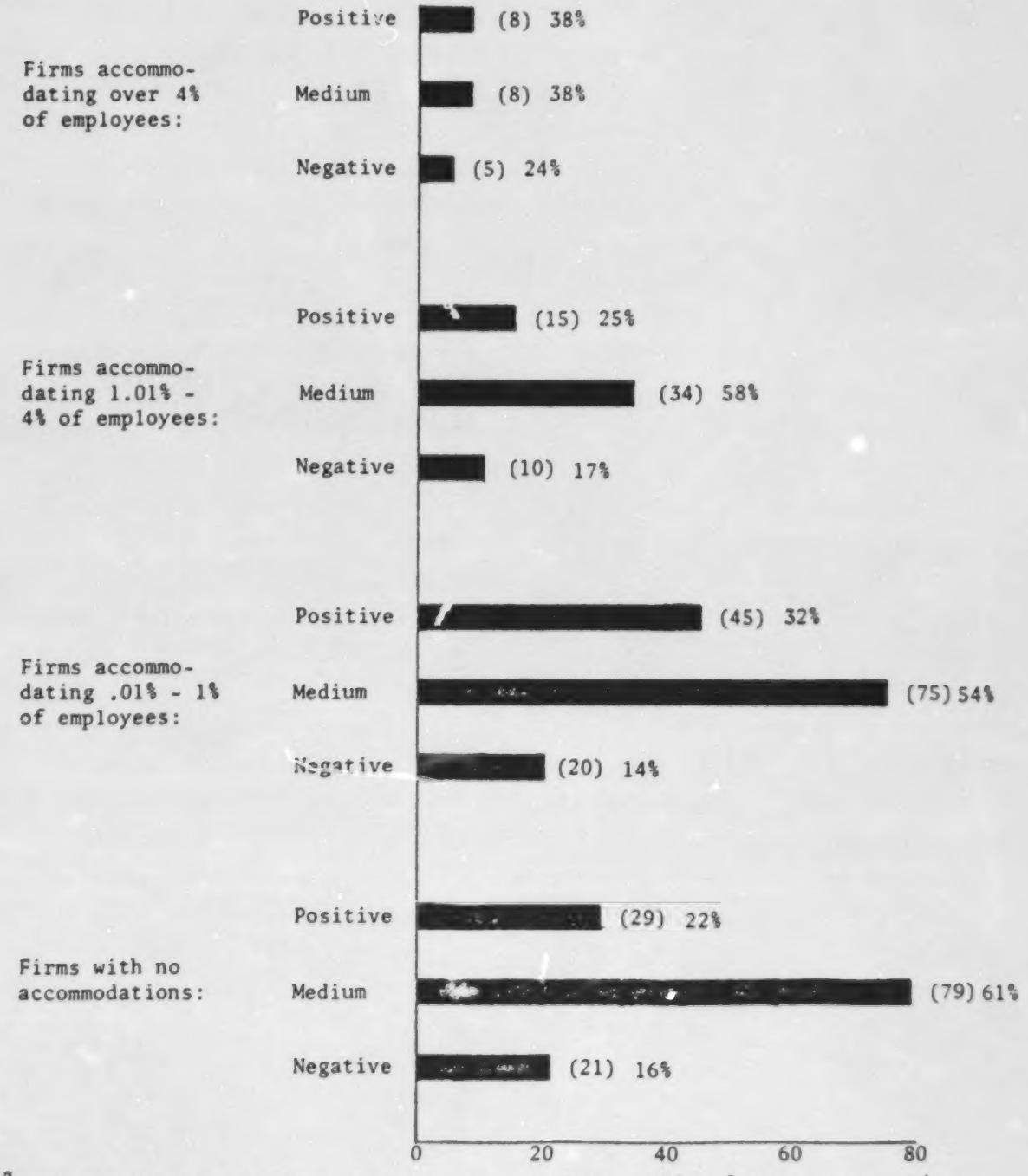
Do firms that have provided many accommodations view accommodation as useful for public relations? The data show clearly that firms with high percentages of handicapped workers and firms that have made many accommodations felt strongly that they had benefitted in terms of public relations (87% and 80% respectively). They also disagreed with the statement more rarely (4% and 2%) than did less active firms (8% and 7%). The interview respondents, which represented the most exemplary firms in the sample, were frequently undertaking activities designed to make their efforts on behalf of handicapped employees more visible. There was considerable variation in the ways they went about it, and many such public relations activities were directed only at other employees within the firms.

The "positive" and "negative" views of all responding firms were computed (using all the responses to the series of questions probing firms' experiences and attitudes) and divided according to the percent of each firm's total workforce that had received accommodations. The results are depicted graphically in Figure 1. This shows that (1) firms in all groups respond more favorably than unfavorably to handicapped workers and accommodations, and that (2) the percentage of "medium" (or indecisive) responses declines as experience with accommodation increases. (See also Figure III-1.)

Firms were then analyzed in terms of which factors were most often cited as decisive by those firms that hired and accommodated many handicapped workers (5% of the workforce) and those that hired and accommodated relatively few handicapped workers. The factors disproportionately cited as decisive by the most active firms were: securing dependable workers, reducing risk of accident, attracting workers with scarce skills, compliance with the law, and prohibitive costs. The decisive factors disproportionately (more often than firms in general) cited by less active firms were: the productivity factors, concern over costs, concern over inherently unsafe worksites, and the negative reactions of customers, coworkers, and unions. In short, the actions of firms appear consistent with their perceptions of the productivity of the disabled, costs of accommodation, market factors (customer reaction), safety, and coworker reactions. This pattern is consistent with the need for more information to clarify what the "facts" of productivity and costs really are.

Figure 1

Attitudes by Percent of All Employees Accommodated[a]



[a]Source: Calculated using responses to questions probing factors encouraging or discouraging accommodation.

Nature of the Position

Another factor affecting the prevalence of accommodation was the occupation of the worker to be accommodated. This included consideration of both the level of the position within the firm and the type of work done.

Level of the Position within the Firm

Are high-skilled and influential employees more likely to receive accommodations than other employees? Because the researchers were not able to learn the occupational distribution of all handicapped workers within responding firms, the relative frequency of accommodation among handicapped workers in different occupations cannot be known with certainty. To talk about relative prevalence of accommodations among occupational groups, it is necessary to make some assumptions. First, a disproportionate number of handicapped employees in industry are in clerical and operative jobs. This assumption emerges from the observation that these medium-skill occupations are the most frequent targets of occupational training for handicapped individuals. The necessary skills can be learned in a relatively short time, and thus a person whose education may have been delayed or interrupted can still become competent in these occupations. In addition, possession of such skills gives a handicapped applicant something concrete to offer an employer, a tangible reason to hire the handicapped applicant rather than a nonhandicapped individual. Second, it is assumed that laborer and service worker occupations are not promising occupations for handicapped workers, as there is no particular incentive for employers to hire them. Finally, it is assumed that there are not many handicapped officials and managers, because many handicapped persons may not have had a long enough or continuous employment history to be promoted to managerial levels. Given these assumptions, and based on the data provided by employers in the company survey, the researchers inferred that accommodations are distributed nearly proportionately across occupations, with some tendency for professionals and technicians to be accommodated most frequently, relative to their prevalence as employees.

Of the 1190 accommodated individuals about whom detailed information was provided, Table 13 shows that 5.5% were officials and managers, 24% were professionals and technicians, 46% fell into the medium-skill category

Table 13

Occupational Categories of Accommodated Workers

Occupational Category	Frequency of Response	
	Number	Percent
Officials and Managers	65	5.5%
Professionals	178	15.0
Technicians	105	8.8
Office and Clerical Workerd	249	20.9
Sales Workers	16	1.3
Craft Workers	134	11.3
Operatives	296	24.9
Laborers	97	8.2
Service Workers	50	4.2
Total	1,190	100.0%

of clerical workers and operatives, 11% were skilled craft workers, 12% were in the lower-skill categories, and a very few were sales workers, which is a category that encompasses a wide range of skill levels. Further distinctions are possible by comparing the types and costs of accommodations provided to persons in various occupational groups.

Are high-skill workers the most likely to receive costly or "innovative" accommodations? Detailed information is provided in Table 14 on the costs of accommodations provided for persons in different occupations. Some general conclusions are readily apparent. First, those employees in high-skill occupations are the most likely to receive costly accommodations.

Much higher percentages of the accommodations provided for managers, professionals, and technicians cost over $1,000 (22%, 27%, and 25%, respectively) than for workers in other categories; for clerical workers 13.5% of accommodations cost over $1,000; for other workers, much smaller percents were expensive. Likewise, more than half of all accommodations provided for relatively low-skill workers cost nothing, while this was not true of managers, professionals, or technicians.

If one looks at types of accommodations received, one finds similar variances by the skill levels of occupations (see Table 15). Environmental and equipment accommodations are the most likely to be provided to persons in high-skill occupations. For example, some 24% of professionals and 12-15% of managers and technical workers accommodated received enviromental accommodations, as compared to 4% of service workers and 4-8% of crafts workers and operatives.[1] Auxilary, at least 12% of techincal workers, 15% of managers, and 15% of professionals received equipment accommodations in contrast to 4% of crafts workers, 7% of operatives, 6% of laborers, and 4% of service workers. On the other hand, there is also a tendency for office workers to receive equipment accommodations. At least 9% of clerical workers accommodated received equipment accommodations.

Lower skill workers are more likely to receive procedural (orientation, training and transfer, and job modification) accommodations than higher skill occupations. This may be in part because the jobs of higher skill occupations

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[1]Since workers may have received more than one accommodation, percentages receiving particular kinds of accommodation cannot be simply added across accommodations.

Table 14

Job Category of Accommodated Employees

by Total Cost of Accommodations[a]

Job Category	Percent of Accommodated Employees for Which Total Cost of All Accommodations Was:[b]										Total Job Categories and Costs Reported	
	Zero	$1-99	$100-499	$500-999	$1,000-1,999	$2,000-4,999	$5,000-9,999	$10,000-14,000	$15,000-19,000	$20,000 or more	Number[c]	Percent
Officials, Managers	49.0%	17.6%	5.9%	5.9%	11.8%	5.9%	2.0%	0%	0%	2.0%	51	5.6%
Professionals	39.3	14.8	11.5	7.4	5.7	9.0	2.5	.8	3.3	5.7	122	13.5
Technicians	36.1	19.4	11.5	8.3	12.5	4.2	0	2.8	1.[illegible]	4.2	72	8.9
Office, Clerical	47.8	19.1	14.6	5.1	5.1	5.6	1.1	0	.6	1.1	178	19.6
Sales	68.8	0	18.8	6.3	0	0	0	6.3	0	0	16	1.8
Crafts	67.3	19.4	5.1	3.1	4.1	0	0	1.0	0	0	98	10.8
Operatives	51.0	24.1	15.1	4.9	.8	2.4	.8	.8	0	0	245	27.0
Laborers	55.1	14.6	13.5	12.4	2.2	2.2	0	0	0	0	89	9.8
Service Workers	75.0	8.3	2.8	8.3	0	0	0	2.8	0	2.8	37	4.0
Total											908	100.0%

[a]Source: Company questionnaire responses

[b]Percentages add across rows to approximately 100% (rounding errors).

[c]This is the number of workers in each category for whom accommodation costs were reported.

Table 15

Job Category of Accommodated Employees by Type of Accommodation Received[a]

Job Category	Percent of Accommodated Employees Who Received:[b]																Total Job Categories and Accommodation Types Reported	
	Removal of Barrier	Adjusted Work Environment	Adjusted Table, Desk	Other Rearrangement	Relocated Worksite	Modified Phone, Typewriter	Microfilm, Dictaphone	Other Special Equipment	Job Transportation or Mobility	Reassigned Tasks	Modified Work Hours	Other Modification of Work Procedure	Assigned Aides, Reader	Additional Training	Oriented Coworkers, Supervisors	Transferred to Another Job	Other Accommodation	Number[c]	Percent
Officials, Managers	12.3%	7.7%	7.7%	4.6%	3.1%	15.4%	0%	6.2%	10.8%	16.9%	21.5%	6.2%	0%	3.1%	12.3%	12.3%	9.2%	65	5.5%
Professionals	23.6	7.3	22.5	17.4	2.8	7.9	6.2	14.6	10.1	9.6	6.2	7.3	4.5	3.4	27.0	1.7	21.3	178	15.0
Technicians	11.5	3.8	10.6	8.7	4.8	3.8	2.9	11.5	4.8	14.4	5.8	6.7	6.7	7.7	26.9	6.7	25.0	104	8.8
Office, Clerical	9.6	5.6	10.0	6.8	1.2	9.2	2.8	8.0	6.0	19.3	10.4	14.9	6.8	9.2	32.1	10.8	11.6	249	21.0
Sales	0	0	6.3	0	0	0	0	0	6.3	6.3	6.3	0	0	12.5	62.5	0	18.8	16	1.4
Crafts	4.5	.8	4.5	4.5	.8	.8	.8	3.8	2.3	13.5	8.3	27.1	3.8	4.5	29.3	14.3	21.8	133	11.2
Operatives	3.7	3.1	8.8	5.8	2.7	.7	.3	6.8	5.1	13.6	8.1	20.0	6.8	12.5	35.3	24.7	7.1	295	24.9
Laborers	8.4	8.4	13.7	8.4	6.3	1.1	0	6.3	0	21.1	9.5	20.0	7.4	14.7	34.7	18.9	12.6	95	8.0
Service Workers	4.1	2.0	0	2.0	2.0	4.1	0	4.1	2.0	14.3	4.1	8.2	0	10.2	22.4	30.6	30.6	49	4.1
Total																		1184	100.0%

[a]Source: Company questionnaire responses

[b]Percentages add across rows to more than 100% because employees often received multiple accommodations.

[c]This is the number of workers in each job category for which at least one accommodation type was specified. The number of accommodations is much larger.

are less adaptable to change, or, alternatively, are already sufficiently flexible in time and physical requirements that accommodation is not often required. For instance, only about 10% of professionals and 14% of technical workers appear to have received job modifications or training and transfer accommodations in contrast to at least 19% of office workers, 27% of craftsmen, 25% of operatives, and 21% of laborers. In all cases above, these percentages are for occupational workers who received accommodations, not for all disabled workers in those occupations. No data was secured from firms on the occupations of nonaccommodated disabled workers (although comparisons have been made of the distributions of occupations in our accommodated worker sample to the distribution of occupations among workers generally in industry).

The telephone interviews, which investigated for each firm the accommodation which that firm felt was the most significant, shows even more strongly the tendency for high-skill workers to receive the most "interesting" accommodations. Of the 85 accommodations discussed, 37 (or 44%) were provided for clerical workers, 19 (22%) for operatives, and very small numbers for workers in other categories.

Type of Work

As mentioned previously, the type of work to be performed can greatly affect the likelihood of accommodation. A number of firms surveyed indicated that they "did not have the kinds of jobs that disabled could do." While this may often reflect misconceptions about the abilities of the handicapped, rather than the ability of the individual to do the job, it is also true that this tends to be the case more often in manufacturing and highly physical jobs than in the finance and service industries. The existence of such jobs affects not only the likelihood of hiring and accommodating handicapped workers, but also firms' (and workers') perceptions of such practices. One employee reported no individual accommodations in detail, but stated:

> Because much of our work is physical, people are reluctant to identify themselves as handicapped. We have some workers who are missing fingers, for instance, but are not I.D.'d as handicapped. Our agreement with the union makes no specific provisions for handicapped persons. We have attempted to

place workers injured during employment with our firm back into a job they can do as part of vocational rehabilitation.

Some variation in practices according to the physical demands of the jobs in question was also found within a single firm. While it is true, as stated earlier, that many firms with higher skill jobs adopt a positive attitude towards hiring and accommodating the handicapped that tends to carry over to lower-skilled jobs, some of the firms studied indicated that they were less likely to place handicapped workers in hourly manual labor jobs.

Evidence from interviews suggested that the likelihood of accommodation increased in situations where it was likely that the adaptation would benefit not only a particular worker but other disabled workers and indeed other nondisabled employees. In such situations, costs could be justified as not chargeable to the single worker but to a larger group of workers. This pattern tended to make accommodation more likely if management perceived safety issues arising in a job setting if accommodation was not made -- safety both of the disabled employee and of fellow workers. On the other hand, concern for safety was also a major consideration of those situations where firms rejected attempting an accommodation or hiring a disabled person. In such firms, it often must be a focus of EEO staff to convince managers and supervisors that the disabled are no less safe than nondisabled employees.

Characteristics of the Worker

Another set of factors affecting the prevalence of accommodations was related to the characteristics of the worker in question. These factors include the worker's qualifications, work readiness, whether an existing employee or a new applicant, age, nature of disability, and whether or not the worker has self-identified or is otherwise known to be handicapped.

Qualifications

Do firms see accommodation as an uncertain investment for a new applicant who lacks strong skills or work background? As mentioned above, when employers were asked this specific question, 23% responded affirmatively, 28% were not sure, and 27% responded that this was not a deterrent to accommodation. (See Table 11 on page 39). Table III-12 shows that firms that have hired the fewest handicapped applicants tend to deny the importance of this

factor more frequently than firms that have hired the most handicapped workers. The latter group was equally divided between agreeing and disagreeing with the statement. Firms that have made the most accommodations, as shown in Table III-13, are the most consistent in stating that a lack of skills does not deter accommodation. However, in discussions with interview respondents, many of them stressed that the qualifications of the individual are the primary considerations in the decision to hire. If the individual is qualified to do the job, then the question of how best to accommodate is secondary. A well-qualified handicapped individual who is a valuable resource to the firm will not have difficulty receiving the needed accommodations.

Work Readiness

This was one of the factors most frequently cited by interview respondents as important in the hiring and accommodation decisions. It included such considerations as the attitude of the individual toward his or her disability, toward the employer, toward work in general, and toward the particular job in question. If an applicant has a positive attitude and a determination to work hard at making the placement a success, he or she is likely to be hired and to receive the accommodations needed. Many respondents stated, however, that they had often encountered disabled individuals who lacked the needed "work socialization" and were therefore not likely to succeed on the job. Because this entire set of attitudes is nearly impossible to measure or predict, the extent to which an applicant will live up to the employer's standards of work behavior is one of the biggest "unknowns" in hiring decisions involving disabled and able-bodied persons alike.

Existing Employee vs. Applicant

Are accommodations more likely to be made for an existing employee who incurs a disability than for a disabled applicant? For existing workers, the level of productivity is known and there is less uncertainty about what will be gained from the accommodation decision. Such workers will have more seniority, more union support, and more favorable concern and willingness to adapt behavior from fellow employees. There is more impact on the morale of the firm's total labor force from accommodation action. There

may be more fiscal incentive to the firm to accommodate to the extent that the firm is self-insured or pays experience-based insurance rates. Our data does not indicate, however, any tendency for accommodation to increase as the worker's seniority increases. Rather, it is enough that the worker acquire enough seniority to be considered "one of the family." In the words of one employer:

> The modifications made to accommodate the needs of our current workforce were done to retain good dependable employees in most instances and to retain skills hard to replace. The monetary cost of these cannot be assessed per se but the benefits do more than certainly offset them.

Table 16 shows that about a third of all currently disabled workers who received an accommodation were not handicapped at the time of hire, and presumably became disabled while employed through illness, injury, or aging. Rarely was the disability due to a work-related injury. In the telephone interviews with 85 firms, less than half a dozen cases of work-related injuries were reported, accounting for under 5% of the accommodated workers reported.

A comparison of the dates hired and dated accommodated, shown in Table 17, reveals that a large number of employees were accommodated at a time significantly later than the date hired. This includes not only those who became disabled after they were hired, but also workers for whom there was initially no accommodation need or no recognition of the need. Some interview respondents indicated that this was due in part to an increased awareness of the needs of the disabled and how to meet them. Thus, individuals who had managed before without accommodations now find their work easier, their productivity increased, or their variety of possible job tasks expanded through provision of accommodations.

Age

Within a given job classification, one might anticipate that accommodation would increase in probability the younger the worker, since the firm would have a longer period of time to recover any costs of accommodation and to enjoy the benefits of accommodation. It is also possible that since the younger workers have less work history and may be more likely to move on, that they would be less likely to receive extensive accommodations. There

Table 16

Was Employee Handicapped When Hired?

Response	Frequency of Response	
	Number	Percent
Yes	732	61.5
No	35	30.1
No response	100	8.4
TOTAL	1,190	100.0

Table 17

Accommodated Handicapped Workers:
Date Hired and Accommodated

Date	Hired		Accommodated	
	Number of Workers	Percent of Accommodated Workers	Number of Workers	Percent of Accommodated Workers
1969 and before	370	31.1	88	7.4
1970-1974	197	16.6	132	11.1
1975-1979	350	29.4	389	32.7
1980-1981	190	15.9	399	33.5
Not reported	87	7.0	182	15.3
TOTALS	1,190	100.0	1,190	100.0

was insufficient data from the survey to test either of these hypotheses. However, accommodations were found for older workers approaching retirement.

Nature of Disability

Tables 18 and 19 show how accommodations were distributed among workers with varying types of disabilities. Table 18 shows the types of accommodations provided. The expected tendencies emerge: barrier removal and worksite adjustments for persons using wheelchairs, telephone (etc.) modifications for hearing-impaired persons, interpreters for deaf persons, additional training for mentally retarded persons, and orientation of supervisors and coworkers in response to a number of functional limitations, particularly mental retardation, impaired speech, deafness, and impaired vision.

Table 19 divides these accommodations according to cost. Wheelchair users and blind persons receive by far the most expensive accommodations; the most frequent low- and no-cost accommodations are provided for persons with impaired vision, impaired hearing, other health conditions which limit activity or endurance, and miscellaneous categories, including progressive conditions. As expected, the most frequent and most costly accommodations were provided persons with the most severe and/or most visible disabilities.

Self-Identification

The legislation regarding affirmative action for the handicapped only provides protection for those individuals that identify themselves to the employer or are otherwise known to be handicapped. The tendency to self-identify is greatly affected not only by an individual's personality and attitudes, but also by the nature of his/her handicap. Those with the most severe and the most obvious handicaps are most likely to self-identify. Those with hidden handicaps or disabilities with a great deal of stigma attached are much less likely to self-identify. In any case, the number of individuals who do self-identify is very small. While it is impossible to estimate accurately the number who do, it appears that less than 20% of disabled workers self-identify. This "self-identification" as a means of identifying handicapped individuals who might need special accommodations

Table 18

Handicapping Condition of Accommodated Employees by Job Category[a]

Handicapping Condition[b]	Percent of Accommodated Workers Having Handicaps That Are Classified as:[c]									Total Job Categories and Handicaps Reported	
	Officials, Manager	Professionals	Technicians	Office, Clerical	Sales	Crafts	Operatives	Laborers	Service Workers	Number	Percent
Wheelchair User	7.9%	45.6%	14.%	20.2%	0%	1.8%	9.6%	.9%	0%	114	8.5%
Other Walking Limitations	6.3	17.4	8.5	21.0	.4	12.5	[illegible]	9.8	2.7	224	16.8
Total Blindness	0	32.7	11.6	17.3	0	1.9	30.8	1.9	3.8	52	3.9
Other Impaired Vision	4.2	12.7	4.2	16.9	0	16.9	3o.6	4.2	4.2	71	5.3
Deaf	1.4	11 1	13.2	31.3	.7	6.9	25.0	7.6	2.8	144	10.8
Other Impaired Hearing	10.9	9.1	5.5	38.2	1.8	9.1	12.7	7.3	5.5	55	4.1
Limited Use of Arms	4.2	14.6	4.9	21.5	.7	12.5	27.1	9.0	5.6	144	10.8
Impaired Speech	1.9	7.5	7.5	26.4	1.9	13.2	32.1	9.4	0	53	4.0
Cosmetic or Skin	0	4.5	9.1	18.2	0	9.1	31.8	18.2	9.1	22	1.6
Mental Retardation	0	2.4	0	21.4	0	2.4	23.8	35.7	14.3	42	3.2
Other Mental or Emotional	1.8	8.8	7.0	17.5	3.5	0	35.1	19.3	7.0	57	4.3
Respiratory Condition	2.2	15.2	2.2	21.7	2.2	13.0	21.7	15.2	6.5	46	3.4
Limitation of Activity	10.7	10.3	7.0	13.6	2.8	22.0	26.2	4.2	3.3	214	16.0
Other Condition	2.7	4.1	17.8	19.2	4.1	12.3	30.1	5.5	4.1	73	5.5
Condition Progressive	20.0	12.0	4.0	28.0	0	16.0	20.0	0	0	25	1.9
Total										1330	100.0%

[a]Source: Company questionnaire responses

[b]Where multiple handicaps exist, they are counted separately.

[c]Percentages add across rows to approximately 100% (rounding errors).

Table 19

Handicapping Conditions of Accommodated Employees by Total Cost of All Accommodations Provided to the Employee[a]

Handicapping[b] Condition	Percent of Accommodated Employees for Whom the Total Cost of All Accommodations Was:[c]										Total Handicaps and Costs Reported	
	Zero	$1-99	$100-499	$500-999	$1,000-1,999	$2,000-4,999	$5,000-9,999	$10,000-14,999	$15,000-19,000	$20,000 or more	Number[d]	Percent
Wheelchair User	14.6%	14.6%	13.4%	8.5%	19.5%	12.2%	2.4%	2.4%	6.1%	6.1%	82	8.0%
Other Walking Limitation	54.3	14.5	13.4	17.4	1.1	1.6	1.1	1.1	0	.5	186	18.1
Total Blindness	17.1	12.2	26.8	4.9	4.9	7.3	7.3	2.4	2.4	14.6	41	4.0
Other Impaired Vision	64.0	24.0	4.0	2.0	4.0	2.0	0	0	0	0	50	4.9
Deaf	44.0	17.4	14.7	12.8	3.7	7.3	0	0	0	0	109	10.6
Other Impaired Hearing	35.3	50.0	8.8	2.9	0	2.9	0	0	0	0	34	3.3
Limited Use of Arms	51.8	19.3	12.3	2.6	7.9	4.4	0	.9	0	.9	114	11.1
Impaired Speech	54.2	2.1	20.8	12.5	6.3	4.2	0	0	0	0	48	4.7
Cosmetic or Skin	64.7	11.8	17.6	0	5.9	0	0	0	0	0	17	1.7
Mental Retardation	70.3	2.7	10.8	8.1	2.7	2.7	2.7	0	0	0	37	3.6
Other Mental or Emotional	50.0	14.3	14.3	14.3	2.4	4.8	0	0	0	0	42	4.1
Respiratory Condition	67.7	6.5	9.7	0	9.7	0	0	0	0	6.5	31	3.0
Limitation of Activity	63.5	22.6	8.2	0	1.3	1.3	1.3	1.9	0	0	159	15.5
Other Condition	60.0	21.8	7.3	3.6	1.8	5.5	0	0	0	0	55	5.4
Condition Progressive	50.0	30.0	5.0	5.0	0	5.0	5.0	0	0	0	20	2.0
Total											1025	100.0

[a] Source: Company questionnaire responses

[b] Where multiple handicaps exist, they are counted separately

[c] Percentages add across rows to approximately 100% (rounding errors).

[d] Number of accommodated workers having each handicapping condition for which costs were reported. This is a smaller number than the number of accommodations for those workers.

is therefore ineffective. Most firms are now providing accommodations to many workers who have not self-identified. This is especially true in firms with in-house medical staff and routine methods to identify and keep track of medical restrictions. The fact that accommodations are not limited to the self-identified is a strong indicator again that accommodations are provided principally because they make good business sense, not because of legal requirements.

Additional Factors

A number of other factors have affected the prevalence of accommodation. Some of these are the availability of qualified applicants, government actions, efforts of agencies outside the firm, and the costs of accommodations.

Availability of Skilled Applicants

Are firms which face an overall shortage of skilled applicants the most likely to provide accommodations? The company questionnaire sought an answer to this question by asking firms whether accommodation had enabled them to attract (or retain) workers with scarce skills. Responses were split almost evenly into three groups, as seen in Table 11 on page 39: yes, no, and not sure. Agreement seems to be strongest among:

- large firms (Table III-10);
- service firms, followed by manufacturing firms (Table III-11);
- firms that have hired the most handicapped workers (Table III-12); and
- firms with the most accommodation experience (Table III-13).

Supporting evidence was gathered from interview respondents. The majority of these were in firms where a large part of the jobs have specific skill requirements. They stated that, where there is a shortage of workers in the marketplace offering a particular skill needed by the firm, the firm is more likely to undertake an accommodation for a disabled worker offering that skill.

Is the lack of technical skills among handicapped applicants a barrier to hiring and accommodation? Many interview respondents stated that this is true. The frequency of comments on this subject offered by company questionnaire respondents was noted as additional support for this notion. A few examples of such comments are the following:

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> In working with some groups offering training to the handicapped, we have run into a reluctance becasue of budget constraints upon these groups to utilize up-to-date techniques, etc. They are considerably behind the state of the art.
>
> We would be very happy to hire more handicapped people, but we need to be made aware of more technically trained people.

Many firms, even those identified in this study as exemplary, do not effectively publicize their hiring and skill needs to potential handicapped applicants. Those firms that have made a special effort to educate placement and referral agencies about their hiring needs have found that the quality of referrals from these sources improved a great deal.

Government Action

Are firms that depend heavily on the federal government for contracts the most likely to hire and accommodate handicapped workers? While this discussion has de-emphasized the legislation as a reason for providing accommodations, it is true that the government's requirements have had an impact on firms' hiring and accommodation practices. The company questionnaire responses indicate that firms with a high percentage of federal revenue are somewhat more likely than others to undertake accommodations. Table 20 shows a similar tendency for hiring activity. The firms reporting the highest percentages of revenues from federal contracts were over-represented in the group of firms with the highest percentage of handicapped workers. It is also true, as stated earlier, that the regulations have had a tremendous impact on physical accessibility. The physical access itself has, in turn, increased the prevalence of hiring and accommodation of handicapped workers. However, it is important to note that, because of the lack of clarity of the various definitions in the regulations and because of confused perceptions about what is required and the extent to which it is being enforced, the regulations have not had as great an impact as was perhaps intended.

Are there specific actions that the federal government might take which would be effective in increasing hiring and accommodation activity? The company questionnaire included a series of questions probing firms' receptivity to alternative policy options. The responses are summarized in

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Table 20

Hiring Activity by Federal Contract Dependence

Percent of Employees Reported as Handicapped	Percent of Revenues from Federal Contract			
	0 - 19%	20% - 59%	60% - 100%	Total
Under 3%	117 (61.9%)	15 (57.7%)	16 (55.2%)	148 (60.6%)
3% - 5%	40 (21.2%)	10 (38.5%)	6 (20.7%)	56 (23.0%)
Over 5%	32 (16.9%)	1 (3.8%)	7 (24.1%)	40 (16.4%)
Totals	189 (100.0%)	26 (100.0%)	29 (100.0%)	244 (100.0%)

Table 21. Of the options there presented, none is specifically reported as providing a strong accommodation incentive by most firms. Tax credits are the most frequently cited as a strong incentive (19% of firms). Two types of program aid are rarely cited as providing a strong incentive: providing information (4%) and wage subsidies (8%), even though we have shown earlier that there is serious misinformation among many firms, especially those not now providing accommodations. If the policy options are analyzed in terms of whether they provide any incentive (combining "strong incentive" and "some incentive"), the ranking of policy options is as follows: tax credits (65%), placement by vocational rehabilitation agencies (64%), free technical assistance (56%), more technical training and work experience for the disabled (54%), increased enforcement of affirmative action regulations (48%), providing information about the advantages and profitability of hiring the handicapped (36%), and wage subsidies for the handicapped (34%). Firms were also asked to list the most important of the incentives. Tax credits clearly emerge as the most important incentive to most firms (42%), followed by placement efforts (27%), technical assistance and specialized training (25%), and affirmative action enforcement (23%). Wage subsidies (10%) and providing information (7%) were cited infrequently as important incentives.

Responses were analyzed by firm size, as shown in Table III-15. Large firms were the least interested in tax credits, wage subsidies, specialized training, and provision of information. They disproportionately cited placement efforts and affirmative action enforcement as incentives. Small firms cited tax credits the most frequently, followed by placement efforts on behalf of handicapped applicants.

When firms' responses were separated by industry (Table III-16), there was not a great deal of difference among industries in their reactions to various policy options. The incentives cited tended to mirror the patterns discussed above for all firms.

The listing of the most important incentives was again analyzed separately for firms hiring many handicapped (more that 5% of work force) and few (less than 3% of work force). As shown in Table III-17, those hiring the most handicapped disproportionately tended to cite the following options

Table 21
Firms' Reactions to Policy Options

Option	Percent of Firms Citing Option As:					
	Strong Incentive	Some Incentive	No Incentive	Not Sure	Not Reported	One of Most Important Incentives*
Tax credit for a portion of the cost of accommodation	19	46	25	5	5	42
Provision of free technical assistance for accommodation	14	42	31	8	5	25
Increased enforcement of affirmative action regulations	13	35	34	11	6	23
Placement efforts on behalf of specific applicants by vocational rehabilitation or other service-providing agencies	14	50	19	12	5	27
Direct wage subsidy for severely handicapped workers whose productivity is below standard	8	26	46	15	5	10
Funding for more technical occupational training or work experience for handicapped persons	15	39	27	14	5	25
Provision of information by the government documenting the advantages and profitability of hiring handicapped persons	4	32	42	16	6	7
Other	5	4	0	1	90	9

*Total adds to more than 100% because firms were asked to state the two most important incentives.

as providing incentives: technical training, placement efforts, and tax credits. Firms hiring the least handicapped disproportionately cited technical assistance, though tax credits and placement efforts emerged even more frequently.

When the analysis was redone for firms grouped by the extent of their past accommodation experience relative to the number of handicapped workers, (Table III-18) a different pattern emerges. Firms with relatively less accommodation experience ranked policy options as follows: tax credits (79%), placement efforts (78%), specialized training (78%), technical assistance (65%), affirmative action enforcement (65%), wage subsidies (59%), and providing information (52%). For firms with extensive accommodation experience, the ranking was: placement efforts (77%), tax credits (76%), specialized training (71%), technical assistance (62%), affirmative action enforcement (47%), providing information (43%), and wage subsidies (39%). Both groups of firms cited affirmative action enforcement less frequently than did firms with intermediate amounts of accommodation experience.

Other observations. A number of interview respondents stated that DOL enforcement officials tend to be punitive in their approach and not always well-informed about business in general and employment practices in particular. Other comments were similar to the following:

> From the standpoint of national policy, DOL complaint investigations and compliance reviews, particularly at the first level, are exceedingly tedious and time consuming and ignore the burden placed upon management to be responsive beyond reasonable investigation requirements.
>
> The enforcement focus is constantly upon the detailed management of and record keeping associated with the process instead of simply focusing on results as compared with opportunity together with examination of reasonable evidences of good faith efforts.

Many of the observations not only extended to the monitoring of affirmative action efforts for handicapped persons, but also covered enforcement activities aimed at other protected groups. In fact, firms' perceptions about DOL enforcement may be largely drawn from the more general compliance activities.

Efforts of Agencies Outside the Firm

Where there is active placement, advocacy, and assistance being offered on behalf of a disabled applicant or employee by some outside government agency, insurance agency, or rehabilitation counselor, there is greater likelihood that the firm will find a way to accommodate the employee. This is especially true if the agency has had a long-term relationship with the employee, is able to provide accommodation suggestions and is knowledgeable about the skills and limitations of the worker. It was also mentioned by one firm that the availability of outside resources to provide support services such as transportation and independent living services can be a factor, especially where individuals have poorly developed social skills, limited work experience, or little experience with living independently in the community.

The quality of the efforts of outside agencies received mixed reviews from interview respondents. Some offered high praise for the agencies with which they work. Others echoed the comments of one employer:

> The most frequent problems I encountered with employing the handicapped relate to the preliminary work done prior to employment. Adequate skill assessment, counseling, accommodation needs, etc., are usually overlooked and then surface as problems after a person is employed. Sometimes these are addressed and corrected (if needed); however, a certain level of frustration usually develops which is unfortunate. On the other side of the fence, this sometimes leads to termination, which is tragic in my opinion. Therefore, appropriate work must be done upfront prior to employment.

Some firms have taken decisive action to see that the efforts of outside agencies are as effective as they can be. They have been officially represented on the Boards of Directors or Advisory Councils to such agencies and community organizations. They have spent considerable time with agency representatives (counselors and placement workers) to acquaint them as thoroughly as possible with the hiring needs, priorities, and policies of the firm. The agency and the firm both benefit from such activity, as the time spent on unproductive referrals is reduced significantly.

Cost

Cost rarely is a factor cited as limiting accommodations. Firms often appeared not to calculate costs in advance of accommodation, to do little recordkeeping on costs, and to view only the "out-of-pocket" expenditures as costs. The time of supervisors or EEO officers already on salary, and the time and materials cost of the building maintenance group in physical adjustments already funded by a firm's overhead, tended to be ignored as costs of accommodation, since no direct unanticipated costs were incurred. Rather, such costs were treated as the routine costs of personnel management and building maintenance which could arise with any employee. Thus, there is a systematic bias to underestimate the costs of accommodation with the disabled worker, but also with all other workers as well. Since few firms reported that the accommodations undertaken had not been cost-beneficial, firms appear content with the reasonable profitability of their past accommodation decisions. On the other hand, most accommodations involved little reported cost. It is conceivable that, except in rare circumstances, accommodations which would involve significant out-of-pocket expense are simply not considered. In such cases, the firm may then seek to assign the worker to other jobs where expensive accommodation is not needed and will reject applicants for hire if other such jobs are not identifiable.

While it is true that, in general, cost was not cited as a major factor, it is also true that the firms studied in detail were those with the most exemplary practices, and thus tended to be those for whom cost was not a major deterrent to accommodation. It is also true that the extent to which cost is a factor is influenced by many of the other factors mentioned in this discussion as affecting prevalence of accommodation, such as:

- size of firm;
- percent of revenues from federal contracts;
- personnel practices in general and company policies towards all employees;
- availability of specific skill;
- level of position in the firm;
- value of the individual to the firm; and
- economic conditions.

This last factor was probably the most important at least to some firms. One firm actually stated that the chances of an individual receiving an expensive accommodation (which the firm would otherwise be happy to provide) during times of economic recession were essentially zero.

PRACTICES ASSOCIATED WITH ACCOMMODATION SUCCESS

There are a wide variety of practices that were identified during the study, especially the on-site case studies, as contributing to the success of firms' experiences with hiring and accommodating handicapped workers. Some of these were stressed by the firms themselves as being important. Others were identified by project staff as worthy of note. Since most of the detail about company practices and processes was gathered during the on-site visits, the sample is obviously too small for detailed analysis of the causal relationships between practices and success. However, while the practices described here are not intended to be prescriptive for all firms, they are those that have been identified by firms and project staff as contributing notably to the success of firms' efforts.

Communication of Management Commitment

Regardless of the size of the firm, the strength and visibility of top management's commitment to accommodating disabled workers was reported as central to implementing policies for affirmative action for the handicapped. Top management's attitudes set the tone in the firm concerning willingness to make special arrangements to increase workers' productivity and toward the disabled in general. A strong management commitment was seen as essential to EEO functions and to encouraging line managers and supervisors to consider handicapped applicants. Firms use many methods for communicating policies to those who must implement them and turn them into action. One such method is the inclusion of affirmative action activities in measures of performance. In one firm this was done not only for EEO staff but for evaluating the performance of all managers. Another method was giving the affirmative action program for the handicapped a high degree of visibility through newsletters, posters, and participation in community events. Handled correctly, this can increase awareness and

receptivity on the part of supervisors, co-workers, and some levels of management that might be resistant or "uncomfortable" with disabled persons. Some firms use an EEO committee (which may or may not include handicapped employees) as a vehicle for communicating company policy and as a feedback mechanism. Many firms have demonstrated their commitment to accommodating the handicapped by the extensive removal of barriers to physical accessibility. These efforts are often highly visible to employees and sometimes involve the investment of large sums of money, further demonstrating the firm's commitment.

Assignment of a Specialist

In some of the firms studied, the single most significant "accommodation" made for handicapped individuals was seen to be the assignment of a single individual to the responsibility of carrying out affirmative action and EEO policies for the handicapped. Whether this was a full-time role or part of the individual's other AA or EEO responsibilities, the existence of such a "specialist" seemed to increase the likelihood that firms would hire and accommodate handicapped employees. To some extent, this may be due simply to the attention and time that the specialist is able to provide to the problems of a job applicant or internal employee, rather than any particular expertise in accommodation. The specialist is also more likely to have the time and mandate to acquire knowledge both of laws and regulations affecting accommodation, and of the successful practices of other firms, the available resources in the community to assist in planning accommodation, and the needs and preferences of the disabled worker and supervisor. The existence of the specialist also signals to hiring managers and supervisors a strong top management commitment to hiring and accommodating the handicapped.

Special Handling of Applications

In some firms, one of the major contributions of the specialist has been to establish special procedures for reviewing and tracking applications of handicapped applicants. Some of the techniques found to be useful include:

- giving special handling to referrals of handicapped applicants to hiring managers, including screening applications ahead of time to weed out applicants who are not qualified, compiling references and transcripts to accompany the application, and discussing the applicant's qualifications, limitations, and possible solutions with the manager prior to each interview;
- following up each interview and instituting procedures for tracking applicant flow, to ensure that individuals not hired are referred to other potential positions and not just dropped from the pool of applicants;
- designing a form whereby a hiring manager must document (and defend) the reasons for a decision not to interview a handicapped applicant, or, having interviewed him or her, a decision not to hire, to ensure that each applicant is genuinely considered;
- forming a "selective placement committee," which explores alternate position possibilities for a handicapped applicant who is not accepted in the position for which he or she initially applied, and/or which serves as a resource on accommodation questions;
- studying accommodation techniques used elsewhere that might suggest ways of eliminating or minimizing handicaps relative to specific jobs within one's own firm previously viewed as "infeasible" for persons with some types of disabilities -- in other words, to read, talk to people, keep an open mind.

Centralization of Employment Functions

Many different organizational models of decision-making have been found to be compatible with accommodation. Centralized recruiting, intake, and monitoring of hiring decisions tends to facilitate accommodation, however, by increasing the probability of the disabled applicant's capacity for doing a job being considered by all units in the organization filling job slots. Similarly, although most accommodations involve minor adjustments, and are done directly by the supervisor and fellow workers with no special decision-making process, it is helpful if the adaptation of the disabled

worker is being monitored by a central office. It also appears useful if there is a special set-aside fund for equipment purchases or other adaptations needed to make accommodation feasible. Most accommodations involve little out-of-pocket expenditure, but when exceptionally large expenditures are needed, the operating unit may have budget constraints. The availability of central reserve funds, often under the direction of the firm's EEO specialist, can make these accommodations feasible.

Handling Accommodation Issues During the Interview

Most firms with a high degree of success in accommodating handicapped workers were found to first determine whether the job applicant had the skills and necessary qualifications for the job, and only then to investigate what architectural barriers must be overcome or what other accommodations might be needed. One line of reasoning suggests that such an approach makes the firm more likely to undertake accommodations. The management first needs to recognize that the disabled worker has the needed skills. The subsequent accommodations often then prove minor, once supervisors are assured that the worker is qualified. When accommodation is looked at as part of the judgment from the outset whether the worker is "able to do the job," firms may tend to overestimate the costs and difficulties of accommodation and prematurely give up on consideration of the worker for the job. A counter-line of reasoning argues that appropriate hiring reviews must explicitly include consideration of accommodation. Without explicit discussion of accommodation with the disabled worker and estimation of true costs, an informal consideration of accommodation needs may cause managers to make wrong judgments about accommodation needs and costs, which could deter hiring. Explicit consideration of accommodation needs and costs during the interview process is considered by some firms to lead to valid and complete information for making the hiring decision.

Certainly the goal of both approaches is to make an informed hiring decision without the prejudice of misinformation about the potential accommodation needs of the individual. Prescription of either approach for all handicapped individuals may lead to one kind of error or the other. Chances are that if an individual is severely handicapped, the question

of how that individual will accomplish aspects of the job affected by his or her handicap will need to be discussed. On the other hand, the individual's abilities and qualifications to do the job should be the primary focus of the interview and the need for what are usually minor accommodations should be secondary to the hiring decision.

Establishing a Special Accommodation Budget

Many firms have found that accommodations can be accomplished most easily if there exist a number of different ways of financing them. The majority of accommodations investigated during case study visits were financed by the individual department or division in which they occurred. This was logical and caused no problems, since it was that department or division which also benefitted from the increased productivity of the worker after accommodation. Occasional expensive accommodations, however, were financed by a central budget. This practice was useful in relieving the individual department of a cost burden which managers might have been hesitant to assume. Other types of accommodation do not fit logically into the existing budgeting structure of departments; for example the provision of an interpreter is neither a capital expenditure nor an equipment item, nor logically "chargeable" to training. Thus, the existence of a central budget for accommodations, often administered by the affirmative action specialist, has been seen by many firms as removing one possible barrier to accommodation. In addition, establishing such a budget is one way of formally demonstrating the commitment of top management to affirmative action for handicapped workers.

Selective Placement

Accommodation is most often not something expensive, extensive, or "a big deal" but, rather, is a very practical and profitable management effort to make a worker more productive. Many larger firms view even the rare expensive accommodation as akin to providing a worker with a "better tool" or "piece of equipment," akin to providing a nondisabled worker with a better piece of office equipment to improve production. Even the minor

changes in work schedule or adjustment of furniture are akin to accommodations routinely provided many other nondisabled workers. Indeed, the most common form of accommodation is "selective placement," matching the worker to a job. Thus, disabled applicants are assigned to jobs or tasks where the need for changes in the physical environment or in the job's design is minimized. Selective placement is obviously more feasible in larger firms offering a diversity of jobs. However, even in smaller firms the appropriate matching of the individual worker and his or her skills to available jobs is a common form of accommodation. As in the successes described above, it is important to use creativity and imagination in selecting the appropriate placement and overcoming barriers, and to avoid restricting job opportunities or developing enclaves of disabled workers. The goal is, of course, integration of the disabled into the workforce, and selective placement should be used as a method of increasing job opportunity not limiting it.

Establishing Procedures for Orienting New Handicapped Workers

One case study firm routinely conducts a special orientation whenever a new handicapped worker is hired. This orientation consists of an open discussion with the supervisor and coworkers who will be working with that person; it covers the worker's disability and the work limitations associated with it. As appropriate, other aspects of working with the individual are discussed, such as how most effectively to communicate with him or her and how other workers may be able to assist the disabled person, particularly in the early stages of learning a new job. The disabled worker is told in advance that there will be such an orientation, and is given the option of being present or not. Workers and managers have found that this procedure eliminates misconceptions about disability, increases workers' awareness generally, and facilitates communication on the worksite.

Following Successes

Successful experience in accommodating workers greatly facilitates later efforts at accommodating disabled workers. The manager and supervisor of the earlier successfully accommodated worker are much more likely to be receptive and cooperative when future disabled workers are assigned. Firms in the early stages of implementing affirmative action programs for the handicapped can take advantage of this increased receptivity to increase the numbers of handicapped workers hired and accommodated. This natural tendency can result, however, in EEO officers and managers concentrating disabled applicants too readily with particular managers or divisions. Firms need to be aware that enclaves of disabled workers can emerge (e.g., retarded janitors, deaf machinists) and the attitude develop that disabled workers are limited to this kind of work. Such attitudes can result in narrowing the range of jobs at a plant that are perceived as feasible for the disabled to hold. Thus, continuing efforts and consciousness are particularly needed in order to integrate disabled workers into the broader labor force.

Training

A number of firms studied stressed the importance of training both Personnel and AA staff, and line managers, supervisors, and co-workers about the affirmative action policies of the firm and dispelling common myths about disabled workers. In persuading line managers and supervisors to consider accommodation, EEO officers and higher managers consistently report the effectiveness of relating the accommodation need to the personal experience of the line manager with disabled or elderly family members. This approach helps the line manager see that the accommodation requested is not a "big deal" and the disabled worker is not some oddity but a productive individual who simply requires a few adaptations by others or in the work pattern. Another comparable approach is to remind the supervisor of successful accommodations provided other ongoing workers who became injured, disabled, or more restricted as they aged.

Several firms studied have actually produced training films in-house that spotlight the experiences of several disabled workers and their supervisors. The major messages of these films seem to be:

- that disabled workers are people first and disabled second;
- that handicapped workers are no less safe than their non-disabled co-workers;
- that the biggest barriers to hiring and accommodating disabled workers arise, not from their handicaps, but from attitudes of others, which are mostly caused by lack of exposure and fear of the unknown.

Training of managers and supervisors by top management and EEO staff in affirmative action and accommodations requirements, and successful industry practices can also foster the good will needed to keep minds open. Government-sponsored training and information activities may also be useful, but only if the information actually gets to line managers and supervisors. Affirmative action training of supervisors by the firm itself appears more effective in changing attitudes toward the handicapped than the more diffuse advertising campaigns of government that it is "good business to hire the handicapped."

Involvement of the Handicapped Employees

Accommodations are most effectively undertaken when the disabled worker is asked directly what kinds of adjustments appear needed. This avoids the not infrequent waste of firms undertaking adjustments that the worker, in fact, did not require, or alternatively overlooking inexpensive or minor adjustments that could be done easily if only pointed out. This role can vary from the worker initially drawing attention to the need for accommodations and initiating the accommodation process, to participating in the planning and design process, to simply giving approval of accommodations designed by others. Firms are also becoming more aware of the value of handicapped employees as resources in implementing affirmative action programs. Handicapped workers are often the most valuable source of information about the needs of the disabled workforce and can be extremely valuable sources of insight into the problems and attitudes of co-workers. Some firms have found it valuable to include handicapped employees in awareness training programs.

One additional way of involving handicapped workers in processes that affect them, and at the same time ensuring that accommodation needs are met, is to make a review of accommodations a routine, ongoing process. This could be structured into the regular performance review for each handicapped worker. At this time, the effectiveness of existing accommodations is discussed, and possible needs for additional accommodation is explored. As part of the career planning for handicapped workers, accommodations that may be needed for them as they advance into the next-in-line position should be discussed thoroughly.

Use of Outside Resources

Firms that make explicit contact in their recruitment and outreach to those organizations able to refer disabled employees are more likely to undertake accommodation. Such firms are more likely to find disabled workers having the skills that make accommodation economically worthwhile to undertake. The organizations contacted can be drawn on for advice and expertise concerning the disabled applicant's aptitude and what kinds of accommodation are feasible. It is also apparent that firms financially able and motivated to make accommodations are more likely to be the organizations that have such outreach. The process of experiencing successful accommodation appears to be self-reinforcing. When firms discover that accommodation "works" and is not expensive, they may become continually more active in drawing on the job referral channels maintained by vocational rehabilitation and other programs.

While many firms actively recruit disabled applicants, firms rarely draw on outside resources to assist during the accommodation process; but those that do appear more able to undertake accommodations. Such outside resources include service specialists for disabled populations like the blind and deaf who are aware of the latest available equipment, and vocational rehabilitation professionals. A major gap in the current government- and charity-supported network of services is the non-availability of rehabilitation engineering specialists on call to work with or provide assistance to a firm considering an accommodation. A few states (e.g., Massachusetts, California) have experimented with adding one or two staff serving on a statewide basis as a resource to VR counselors, but locally

available outside resources in job re-design and adaptation to the functional capabilities of a disabled worker are limited. Firms with their own specialized plant engineering and maintenance groups have more capacity to provide accommodation assistance to on-line managers, but this assistance is not particularly expert, although, nonetheless, very helpful. Only the largest firms routinely have significant expertise available in-house. It may be useful for OFCCP area offices to make an expert available to local firms as a separate function distinct from other OFCCP responsibilities.

Another effective type of relationship with outside resources is the involvement of firm staff with a local Project With Industry (PWI). The PWI model of involving firms in setting up training programs for the handicapped appears particularly effective, as compared to more traditional models of government training and later referral of the handicapped to employers. Firms become more interested in recruiting training graduates when they know they or other firms have designed the training; the training tends to be perceived as better and more relevant to job needs. The participation in the PWI also involves the firm in more exchanges with other firms concerning experiences with disabled workers, facilitates the exchange of information and advice on accommodation, and reinforces the firm's overall commitment and interest in hiring and accommodating the disabled.

The sharing of information and experiences with AA personnel and top managers of other firms was frequently cited as one of the most effective uses of outside resources. The example was given of one area where affirmative action officials from a number of local firms get together on a monthly basis over brown-bag lunches to share experiences and discuss problems and successes.

III. CONCLUSIONS AND RECOMMENDATIONS

The main conclusion of the extensive data-gathering and analysis on accommodation practice in industry is that accommodation is very important to the employment of many disabled, but to those firms most actively providing accommodations, it is "no big deal." It happens routinely as needed. It rarely entails much cost. It is done not out of charity but in order to make the worker more productive on the job. It usually works; firms are satisfied with the outcome 80%-90% of the time. Accommodation opens major employment doors to the handicapped; a third of accommodated workers say they could not have held the job without the accommodation. Many of the accommodations which are done are not solely provided for the handicapped but also for many other workers. They are done not to give the accommodated worker an advantage, but rather to bring the worker up to the firm's standards of productivity for that job. Most workers having disability who are employed in industry do not appear to need extensive accommodation. The accommodations that have been done are not the expensive purchases of equipment or difficult removals of architectural barriers which are often the types of accommodation discussed in the new media and which are the fear of many firms. Rather, firms and disabled workers find ways to make the disabled worker productive through minor adjustment of the job and workplace -- transferring the worker to a job or physical site where the impairment or disability does not have to give rise to a handicap, transferring some tasks to other workers, moving furniture, raising a desk or lowering a phone, and so on. It is done usually in the name of benefitting many workers, not in the name of accommodating a particular worker or complying with the law.

The data collected and the analysis of study findings provide a good picture of the current state-of-the-art of hiring and accommodation practices as they exist in the absence of stringent enforcement activity or clearly understood mandates. The legislation and regulations have been a positive factor in increasing the frequency of accommodation and hiring of the disabled. There is an impressive increase in removal of physical access barriers in plants since the legislation was passed. The study did find a

few firms citing enforcement of regulations as a factor in their accommodation decisions for individual workers, and many firms expressing annoyance at the punitive posture they believe has been taken by field DOL representatives looking at their affirmative action practices. Still, a large number of firms concede they have become more conscious of the handicapped and their employment needs because of the regulations and related publicity. EEO officers within firms use the regulations to secure interest by top management in accommodations and policy changes, even when the changes may not have been narrowly required by the regulations. The legislation and the regulations have created a "moral imperative" of sorts to give more attention to the needs of disabled workers and applicants which firms' managers, wishing to be good citizens, have honored.

The legislation, regulations, and related publicity have made coworkers and supervisors more conscious of the needs and rights of disabled workers, and thus more accepting of policy changes and accommodation by management. Indeed, coworkers and supervisors in many firms, because of their greater consciousness, are the first to observe the need for and initiate the accommodation. Similarly, the greater public consciousness of the needs of disabled persons, which has emerged through the legislation and regulations, has provided an increased public relations value to the firm in return for its efforts to hire the disabled. Some of the more glamorous and expensive accommodations probably are at least partially explained by the public relations benefits of being able to tell the public the story of the firm's willingness to help out its severely disabled workers. Finally, disabled workers themselves, whether self-identified or not, have become more bold in asking for accommodation and striving for employment advancement in the context of the publicity and public consciousness to which the legislation and regulations give rise. Rather than through direct enforcement effort, this impact of the legislation and regulations was through the important but indirect sharpening of the public's attention.

Major barriers to effective implementation of the regulations still exist, however, and according to firms studied include most significantly:

- attitudinal barriers - Brought about by myths and lack of experience with disability, placement specialists cited attitudes as the biggest internal barrier to overcome in placing disabled applicants.
- safety concerns - In industries where safety is a major issue, a concern for the safety of the disabled individual and coworkers can be the single biggest reason for not hiring handicapped applicants (though it is also true that a concern for safety can be a motivating factor in providing accommodations that are seen to promote safety.)
- availability of qualified applicants - Firms that actively seek and recruit disabled applicants cite the limited availability of well trained job-ready disabled applicants as a major barrier to increased hiring and accommodation activity.
- unclear requirements - Employers are confused about the requirements for compliance (including the definition of "reasonable accommodation", the kind of records and documentation necessary, and what is meant by "handicapped" for purposes of affirmative action) and often have exaggerated fears of what is expected of them.
- cost - The cost of providing accommodations was rarely cited as an important barrier to accommodation, though more so by firms with little experience in hiring and accommodating handicapped workers. While not an important decision factor in cases where accommodations have been provided, it is expected that the extent to which cost is a deterrent for those who have been turned away is probably underreported in a voluntary study of this kind.
- the economy - Employers often stated that a thriving overall economy is necessary for employment of the disabled to increase both in terms of the availability of jobs and in terms of having the resources to provide accommodations.

While barriers do still exist, the ease with which accommodations are provided by firms accustomed to doing so indicates that accommodation can continue to be encouraged and facilitated by public officials as an effective way of decreasing the number of dependent disabled persons. Many firms in the study were wary of Department of Labor data-gathering out of fear that the Department was moving towards the establishment of quotas, burdensome reporting requirements, and other affirmative action approaches that they have experienced with other disadvantaged groups. Such fear has made federal interest in accommodation a matter of concern to industry. However, many firms might well expand accommodation through their own initiative if they were more aware of the successes of industry thus far, and if they had available to them a network of technical assistance and support services targeted towards assisting firms to establish and maintain effective mechanisms for hiring and accommodating the disabled.

The recommendations that follow summarize industry recommendations for future policy directions, address the major barriers listed above and address other issues and concerns raised during the study. It is felt that, whether future strategies for implementation of Section 503 focus on government enforcement of the regulations or voluntary compliance, a combination of these recommended approaches will be necessary in order for substantial gains to be achieved in employment of the disabled.

TECHNICAL ASSISTANCE

Firms with the least experience with hiring and accommodating handicapped workers tended to cite technical assistance as one of the policy options for the federal government that could provide the greatest incentive for increased hiring and accommodation activity. While it is true that case-study firms had mixed opinions about the usefulness of DOL-provided TA, these were the firms with the most experience and presumably the least need for assistance. It may also be true that firms that have gone ahead and implemented affirmative action programs on their own with little help from the government thus far, tend to be more self-sufficient and less likely to use technical assistance in general. It is also the case that some firms are generally reticent to accept TA from government sources seen as regulatory agencies, preferring to minimize contact with them. Thus,

if technical assistance efforts are to be effective, they must be provided with a number of considerations in mind including appropriate methods, targeting efforts to special needs, and providing the kinds of information that firms are likely to find most useful.

General Approaches to Providing TA

Firms often mentioned a need for DOL to adopt a more helping/facilitating role in the implementation of Section 503 rather than what is typically considered to be one of looking for faults or weaknesses. This is an area in which the provision of TA can have a major impact through substantially changing the role of the government official to one of assisting firms to achieve compliance.

We recommend that DOL take three basic approaches to providing technical assistance to firms. The first is the development of training packages on different topics that can be presented in a conference or workshop setting to a large group of employers or to a large group of managers and supervisors within a single firm. Selected topics for such workshops would be targeted to different audiences such as EEO specialists and affirmative action program coordinators, top level management, personnel and hiring staff, mid-level managers, line supervisors, and general employees. Topics would include such areas as:

- looking for and recognizing accommodation needs;
- job analysis and restructuring;
- accommodation design and rehabilitation engineering resources;
- dispelling myths about disability;
- methods for testing and evaluating qualifications of individuals with various disabling conditions;
- handling issues of disability and accommodation needs during the interview and hiring process (pre-employment inquiries);
- developing special safety procedures for handicapped workers;
- examples of specific accommodations that have proved successful for other firms; and
- understanding the requirements of the regulations.

Workshops of this type, especially those concerning disability awareness, may be best presented by using disabled workers both as sources of

information and presentors, providing a chance to ask questions of the disabled individuals directly. Another approach recommended by employers was involving other firms to share their experiences. DOL could facilitate the bringing together of personnel from a number of firms who would share problems and successes with each other. This might be accomplished by using regional conferences sponsored by industry associations or chambers of commerce where active firms would make presentations to their peers. Presentations by industry representatives have greater credibility with other firms than presentations by government officials.

The second recommended approach to providing TA involves providing on-site technical assistance in response to specific needs of firms. This could include activities such as providing technical information to assist in removing architectural barriers, or researching the availability of specific types of equipment or adaptive devices. The on-site approach to TA with specific components tailored to meet individual needs has the potential for providing practical applications that have a great impact on the hiring and accommodation of individual workers. While this approach would appear to require a substantial initial time investment, for many firms the conference approach would adequately meet the need for information and the number of firms requesting on-site TA would probably be relatively small. Those that would request it would probably be firms with limited in-house experience and expertise, and thus would tend to be the firms for whom such TA could be the most valuable. Also, as reported earlier, once a firm has had success with hiring and accommodating disabled workers, there is a greater likelihood that it will continue to hire and accommodate in the future. If the on-site TA approach can help the firm take that first step, and make the experience a successful one, it can have a tremendous impact on future activities.

The third recommended approach to providing technical assistance is the dissemination of information materials. Although not often cited as a recommended approach in the survey, this partly seems to reflect a disdain for the kind of information from the government that firms have heretofore received. In the past there have been principally public relations efforts and urging, not technical information. We recommend that DOL focus information dissemination efforts on the following types of information:

- success stories of employers with experience hiring and accommodating handicapped workers;
- technical information on how to adapt jobs and tasks for different functional limitations;
- information about technical and placement resources available to firms in their local areas; and
- information about why hiring and accommodating disabled workers is good business practice.

The last of these, information about hiring and accommodation as good business practice, is currently developed internally by some firms as a means of encouraging all employees to do their part towards promoting affirmative action efforts. The information collected concentrates on the documented productivity, low turnover, good attendance and high motivation of disabled workers. In addition to DOL's dissemination efforts, firms should be encouraged to collect this information about their own workers. Firms that do studies of this kind report that it is a very instructive process, brings a high degree of visibility to the affirmative action program and increased general awareness of disabled workers -- as well as documenting that hiring and accommodation are good business with information that is relevant to the employees of that firm.

Targeting TA for Different Types of Firms

As our study results have shown, the extent to which firms hire and accommodate handicapped workers varies with firm size, type of industry, and experience with the handicapped. The development of appropriate TA packages must take these differences into account. The sharing of examples of successful practices should take into account the transferability of practices to the firms in question. For example, some practices such as those involving special handling of handicapped applicants may not be appropriate for smaller firms with smaller personnel functions. It is important for TA providers to understand the decision making processes and organizational structure of the firms they are working with in order that TA can be appropriate to firms' particular situations. It is also important to understand how the nature of the work available may affect

the kind of disabled workers hired, the occurrence of on-the-job injuries, the prevalence of medical work limitations and how these factors may impact on the need for accommodation. For industries with jobs having substantial physical requirements (and where on-the-job injury is relatively frequent), it may well be useful to provide technical assistance on prevention of disability through providing accommodations. Minor adjustment of job requirements to prevent a disability from becoming so severe as to cause a loss of work can greatly reduce corporate disability rolls and public transfer program needs. On the other hand, in highly technical industries where recruiting qualified applicants is sometimes difficult, TA efforts may be more appropriately focused on providing links between the employer and technical training programs so that the employer can become involved in gearing the training provided towards the firm's specific needs. While all firms should be encouraged to incorporate the provision of accommodations into their routine business operations, the specific focus of TA efforts to achieve this goal must be targeted towards the needs of different types of firms. It is clear from contact with case study firms that TA that is designed as a general package for everyone will not be well received by industry, nor will it be effective in bringing about change.

Suggested TA Topics

A number of suggested topic areas for TA workshops were mentioned above that focus on knowledge of disability, knowledge of different kinds of accommodations, and appropriate implementation of the regulations. In addition to these kinds of topics there are a number of practices observed in case study firms which we recommend other firms adopt to the maximum extent possible and appropriate. These practices were observed to be conducive to effective affirmative action activities and provision of appropriate accommodations for handicapped workers. We suggest that the following practices be included in TA efforts, either through training by DOL staff or preferably, through presentation by the firms who have found these practices to be successful:

- strong and visible expression of commitment by top management to accommodating disabled workers, which most often sets the tone throughout the whole firm;

- assignment of a specialist within the EEO/Affirmative Action function specifically for carrying out affirmative action and EEO policies for the handicapped;
- establishing special procedures for reviewing and tracking applications of handicapped applicants;
- centralizing recruiting, intake and monitoring of hiring decisions for handicapped workers to increase the probability of the disabled applicant's capacity for doing a job being considered by all units in the organization, and provide a central special budget for accommodations above the budget limits of individual departments or divisions;
- encouraging managers and supervisors to think of jobs or task assignments where the handicap, and thus the need for changes in the physical environment or in the job's design, are minimized;
- developing a procedure for orienting the handicapped worker to the workplace and pre-employment discussion to orient supervisors and co-workers to the special needs of the worker;
- spreading the word inside the firm about successful experiences in accommodation, which appears to increase receptivity to later appeals for accommodation and following successes with referrals of later handicapped applicants to departments where they have increased likelihood of being hired;
- training by the firm of inside personnel staff, line managers, supervisors, and co-workers about the affirmative action policies of the firm and dispelling common myths about disabled workers;
- explicit contact in recruitment and outreach to outside organiations able to refer disabled job applicants, and subsequent use of such outside resources for advice and expertise concerning the disabled applicant's qualifications and the kinds of accommodations that might be appropriate;
- sharing information and experiences with other firms, and participating in direct training of potential future job applicants through programs like Projects With Industry (PWI);

- involving handicapped workers in their own accommodation process as well as in efforts to increase disability awareness internally; and
- re-evaluating accommodation needs on a continuing basis, perhaps as part of the performance review process.

Equip TA Providers with Knowledge of Personnel Practices

One of the complaints heard repeatedly throughout the study was that DOL staff lack familiarity with industry practices, specifically the employment procedures, personnel functions, organizational structure and decision-making processes. When asked if they would take advantage of technical assistance if offered by DOL, many employers responded that there is clearly potential for DOL to be of a great deal of assistance to industry in working with disabled individuals. However, unless DOL staff receive substantial training in the nature of the private sector employment process, it is unlikely that technical assistance efforts will be well received. First DOL representatives need to be trained in how industry turns labor regulations into practice. This would include a thorough understanding of the hiring process, affirmative action, equal employment opportunity programs, the role of unions, the provisions of collective bargaining agreements, and the ways in which employment and personnel functions fit together. Then, staff will need to become familiar with the particular structure of employment and personnel functions at the particular firms receiving technical assistance. Staff will need to understand the major differences in how employment and personnel functions are structured in different industries and different size firms. Equally important is an understanding of business priorities and economic constraints and how these affect the business practices of the firm. Technical assistance will only be helpful and useful to firms if it is grounded in the reality of how firms operate.

COORDINATE WITH OTHER AGENCIES TO INCREASE SUPPLY OF QUALIFIED APPLICANTS

As mentioned previously, one of the major barriers to effective implementation of Section 503 has been the availability of well trained, work-ready disabled applicants. While it is true that some of the efforts

that need to be made to increase the supply of qualified disabled applicants will be efforts of government agencies other than the Department of Labor, they are discussed here as part of an overall strategy in which DOL is clearly a major actor. We stress the need for DOL to work with these other agencies to coordinate efforts towards common goals and to encourage other agencies to participate in a strategy that will ultimately lead to an increase in employment of the disabled. While it may be true that government agencies that provide educational and vocational training services to the disabled have their own objectives and strategies, the overall goal is a common one of preparing disabled individuals for the world of work. This process cannot begin at the point when an individual begins efforts to enter the job market, rather it must begin early on during the educational and training process. Many respondent firms indicated that they rarely have disabled applicants apply for their job openings and those that do come forward have little training or poor training, even if they have emerged from government programs designed to prepare them for employment. Employers complained that training programs are not responsive to the hiring needs of industry. Vocational programs have not been training enough disabled individuals in technical skills that are in high demand. Some employers felt that some of the more severely disabled, even those with the necessary job skills, were unprepared for the world of work in terms of work habits and work adjustment skills, and in terms of job search and interviewing skills.

We suggest that the increased use of employers in designing and operating training programs is a needed focus for public employment policy. This could be accomplished through expansion of the Projects With Industry program model that is so popular with currently-participating employers. Such involvement by industry not only improves the quality of training in the eyes of industry and ensures that the training focuses on skills in high demand, but creates greatly improved networks of placement and referral for the training graduate. This relationship between vocational training and industry also fosters more commitment and understanding by participating firms to employment of the handicapped.

The issues of improved vocational training especially in high skill careers may be especially relevant for the more severely disabled who may require more extensive accommodations. Study results show that individuals are more likely to receive extensive accommodations if they are highly

skilled or possess skills that are in high demand. Thus, for the most severely disabled with the most extensive accommodation needs, better, more appropriate training may be the key to employment and accommodation. We recommend increased training opportunities for the most severely handicapped having the potential in high technical skill occupations (e.g. engineering) even when the training may involve expensive higher education. Most state vocational rehabilitation agencies and other manpower programs have in recent years been discouraging such training because it tends to take more time and be more costly. However, benefit-cost studies of services to the severely disabled have shown such extended high-skill education and training to be among the most cost-beneficial and effective for the severely disabled.[1] Public programs have been tending to optimize (or really just economize) within their agency budgets in order to produce the most employed trainee "graduates" per dollar. However, such strategies may not be optimal from the viewpoint of integrating the severely disabled into the labor force over the long run. The willingness of employers to go to great lengths to accommodate disabled workers having scarce technical skills indicates that securing such skills is an appropriate strategy for the severely disabled with high long-term payoffs.

Respondent firms also cited increased placement and referral efforts on the part of public agencies as a policy direction that could promote increased hiring activity. Certainly even firms that have established liaisons with public placement and referral programs still indicate that a paucity of qualified handicapped applicants is a major barrier. This is only partially due to the limited number of disabled individuals being trained in high demand skills. Employers suggest that this is also due to some extent to a lack of understanding on the part of placement and referral agencies of the kinds of applicants firms are looking for and a lack of knowledge about which sectors of industry are most likely to hire handicapped applicants.

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[1] See, for example, BPA's An Evaluation of the Costs and Effectiveness of Vocational Rehabilitation Service Strategies for Individuals Most Severely Disabled, May 1975.

The patterns of hiring and accommodation clearly indicate that the prospects for finding work and accommodation are likely to be much greater for the disabled in large firms, high-tech industries (even when the disabled applicant lacks extensive technical skills) and relatively capital-intensive industries. Most of these patterns are not consistent with the usual findings or recommendations for other disadvantaged groups, where low-skill, labor-intensive and smaller businesses are more likely to hire disadvantaged workers. The reason may be partly that industry has experienced the disabled as being especially good workers compared to other disadvantaged groups whose disadvantage comes from limited education, prejudice and limited work experience. (These limitations exist for much of the disabled population also, of course, but less so for those that are in the work force. Job readiness and work adjustment training programs are clearly needed for that segment of the disabled population that suffers these disadvantages on top of the limitation of a disabling condition.) Given this perception, large firms may have more interest and willingness to accommodate a disabled employee; and may also have more resources to expend on adaptation for the disabled worker than would other firms. In the short run, a focus on these types of firms for placement and referrals can go a long way in increasing the number of disabled individuals in the work force. It is important, however, to recognize that targeting referral efforts towards the segments of industry who currently hire the most disabled must be considered a short-term strategy. In order to achieve integration of the disabled into the work force, it is essential that the long term approach include encouraging the less active sectors to implement effective affirmative action programs and begin to hire and accommodate the disabled also.

Another factor that influences the extent to which referral agencies can meet the hiring needs of industry is that many newly trained individuals are not yet ready to compete in the job market and need some interim step as a way in. Suggestions have included more use of "job tryouts", temporary placements that give the disabled individuals a chance to test out job skills and the work load and environment for suitability and give the employer a chance to evaluate the appropriateness of the potential employee before making a long-term commitment. Another suggestion was the use of more subsidized employment programs that not only supplement the income of the worker during an on-the-job training or probationary period but also

include ongoing counseling and other supervision, performance evaluation and other supports from the outside public agency. One firm recommended that wage subsidies be paid directly to the worker rather than to the firm to reduce the paperwork burden on the employer. It was also pointed out, however, that since one of the purposes of most subsidized work programs is to simulate a real work situation, it may be somewhat more appropriate for the worker's paycheck to come from the employer for work performed, to reinforce the notion of payment for performance.

PROVIDE INCENTIVES FOR VOLUNTARY COMPLIANCE

If government were to opt for a strategy of tighter enforcement of existing regulations rather than a focus on encouraging self-enforcement through assistance and incentives, the regulations would need more teeth. In its most extreme form, enforcement could include required data collection and reporting on numbers of disabled, wages, and accommodation, and the introduction of goals and timetables akin to those used in other affirmative action programs for minorities and women. An enforcement focus could link the definition of reasonable accommodation to arbitrary cost guidelines (e.g., accommodations costing less than $2,000 are automatically reasonable; those costing over $20,000 are not required). Such guidelines when linked with hiring targets would be highly controversial, but might produce measurable results. It seems clear, however, that stringent enforcement would seriously damage the current climate of favorable attitudes toward the disabled. While the more punitive approach might increase compliance among firms currently hiring few disabled, this effect must be weighed against the likely loss of good will and the positive steps many firms are taking as a result. Many of these firms, believing that handicapped workers are likely to be extremely reliable and highly motivated, are currently hiring and accommodating more disabled than they might under any such narrow mandates. Since "hiring the handicapped" is often cited as good business and also has moral sanction in the beliefs of employers, voluntary compliance has many more advantages for achieving government objectives than it may have with other protected groups.

If the approach adopted by DOL is more one of relying on self-enforcement of the regulations it is clear that further incentives for

voluntary compliance will be needed to encourage increased hiring and accommodation activities especially in those sectors of industry not currently hiring and accommodating the handicapped. It may not be possible to create incentives that would affect the behavior of all types of employers. There are sure to be some firms that, even given strong incentives to comply voluntarily, would not choose to do so unless they felt that some kind of sanction for noncompliance existed. If, after implementation of stronger incentives, technical assistance programs, and stronger efforts to increase the supply of qualified disabled applicants, many firms have still not chosen to comply, it may be necessary at that time to implement some kind of measure that gives visibility to the regulations and makes clear that compliance is a legal necessity. It may be possible to accomplish this simply through requiring firms to report number of handicapped employees (through an existing mechanism such as the EEO-1 form). However, this would only be possible if DOL specified clearly which individuals it wished to have counted for this purpose so that all parties involved would have a common understanding. For those firms who do not respond to the incentives suggested below it may be that a requirement to report numbers of handicapped employees would serve as a sufficient additional incentive for them to comply without any additional enforcement activity. However, the focus of current efforts should be to implement incentive programs effective enough to render such reporting unnecessary.

Tax Credits

The policy option cited by the most firms as providing a strong incentive for firms to hire and accommodate handicapped workers is the provision of tax credits. Employers indicated that tax credits could entice firms to secure the more expensive equipment and environmental adaptations that might be needed by some handicapped workers and might encourage employers to hire more severely disabled applicants. This may become even more significant as the limited resources available to federally funded public agencies such as state vocational rehabilitation agencies to pay for job accommodations are reduced even further. It was stressed repeatedly that in order for tax credit programs to be effective as incentives it is necessary to establish a smooth and simple system that involves minimal red tape. Many firms do not currently take advantage of existing tax

credits because reportedly "they are more trouble than they're worth". This perception involves more than just the actual required paperwork. Many firms have the percpetion that "getting involved" in a tax credit program of this kind has potential for delays in processing, increased chances of mistakes, audits and increased monitoring. A number of firms stated that if the red tape were reduced then the amount of money involved would probably be worth the trouble, although one firm suggested that the amount of money currently involved was not worth the internal bookkeeping time. Clearly, if tax credits are to serve as an incentive to industry to voluntarily comply with Section 503, they must be designed with these concerns in mind.

Accommodation Set Aside

Another recommendation for providing incentives for industry to voluntarily comply, was that the federal government add a budget line item to its contracts under a standard formula for accommodations of handicapped employees working on federal contracts. This proposal, which emerged from interviews with corporate leaders, would resolve cost inhibitions to accommodation. Given that all firms covered by the regulations are federal contractors, such a line item could be anticipated to have a major impact. Discussions with industry leaders indicate that although cost was rarely cited as the major barrier to accommodation, the extent to which cost is a concern is probably underreported, as firms may not have wished to appear out of compliance with the regulations. It is also the case that cost was more often cited as a factor by employers who currently hire and accommodate few handicapped workers and was considered an important decision factor by firms currently feeling squeezed by today's tight economy. Also as mentioned earlier, this study has not been able to assess the accommodation needs of those handicapped individuals that are not currently employed, and the concern was raised that as more disabled individuals and those with more severe disabilities enter the workforce, the need for costly accommodations may increase. Thus though cost has not been cited as a major barrier in this study, the existence of federal dollars to pay for accommodations can be expected to have a significant impact. To some extent this impact may come not only from the availability of the

funds, but from the increased visibility that such a budget line item would bring to the need for federal contractors to consider the accommodation needs of their employees. The existence of accommodation as a regular budget item in federal contracts would make the effort of considering the need for and providing accommodations more of a routine part of contractors' operations.

The use of a standard formula for a special budget item (such as half a percent of total contract costs) would apply to all bidders and thus would not create any competitive disadvantage for any firm. It would provide the financial means to secure accommodations for disabled workers without hurting the financial performance of any firm. Any claims on the line item for government reimbursement would be fully documented by the submitting firm. Thus, this would also serve as a source of information for DOL about the kinds of accommodations being provided by contractors and their associated costs. Any unused funds in that line item under the contract would be returned to the Treasury, thus avoiding any incentive for the firm to economize on the provision of accommodations for the sake of increasing profit. It can be argued that the federal government already pays for the accommodation of disabled workers used on government contracts indirectly in the cost of the total contract revenue going to support the contracted activity. This would be a mechanism for separating out those costs and providing a source of funds that would fall outside any profit motive a firm may have to economize and cut costs.

Exemption from Reporting Requirements

Should the implementation of incentive programs, technical assistance, and strong efforts to increase the supply of qualified disabled applicants prove insufficient to encourage adequate voluntary compliance, and should DOL decide to implement reporting requirements, an additional incentive for compliance could be usefully added. The goal would be to exempt complying firms from some of the reporting burden. Firms that actively hire and accommodate handicapped workers, once they had provided evidence that they do so, might be required to submit reports much less frequently than firms that were still in the process of coming into compliance. This could avoid the most serious potential pitfall of implementing reporting

requirements, namely undermining the good will and positive efforts of exemplary firms. This concern is well illustrated by the following comment from an employer participating in the study:

> In my opinion, responsibly managed organizations recognize that accommodating the handicapped is just good business and part of their moral obligation to the community in which they are located. Legislating that company's must record and measure every activity even remotely related to this issue not only fails to achieve the purpose for which such legislation is intended; it results in mounds of unproductive and expensive paperwork that fuel the fires of inflation in today's economy. And the primary sufferers of the ravages of inflation are the very people that such regulation is meant to protect.

Once again, it must be stressed that the implementation of any new requirements and exemptions to them would have to be done in a way that the requirements are clearly understood by industry. Any introduction of additional confusion about what is expected of industry would seriously undermine the enforcement effort.

CLARIFY THE REQUIREMENTS FOR COMPLIANCE

A concern that was mentioned often throughout the study in a variety of contexts was that the requirements for compliance with Section 503 are unclear. Firms reported confusion about why the definition of handicapped is so broad and what the implications of that are for affirmative action efforts, what is meant by reasonable accommodation, what kind of information they are required to keep, what should be in an affirmative action plan for the handicapped, how to avoid complaints, to what extent architectural barriers must be removed, how to balance affirmative action of the handicapped against the requirement to actively seek and hire women and minorities, how the requirement to accommodate fits in with the constraints of union rules, and the extent to which compliance is really necessary given the apparent lack of teeth of the regulations. Effective implementation of the Section 503 provisions requires a clear understanding of what's expected of industry and a common understanding between government and industry about what constitutes compliance.

Clarify the Definition of Handicapped

The Section 503 provisions describe a very broad population of individuals with a wide range of disabilities and severity of conditions

as being handicapped, including those with a history of or considered as having such limitations. This definition is necessarily broad to ensure that all disabled individuals, regardless of type or severity of condition are protected from discrimination solely on the basis of the presence of that condition. We suggest, however, that this broad definition encompasses not only those who are "employment handicapped" as a result of their condition, but also all those who are disabled including those whose disability is mild and does not pose a handicap. We concur with the current law that all of these individuals should be protected by non-discrimination provisions, but suggest that the current definition is actually one of "disabled" rather than "handicapped" and that, in fact, all disabled should be protected from discrimination whether handicapped or not.

On the other hand, the Rehabilitation Act seeks not only to protect all disabled from discrimination, but through Section 503, seeks also to provide for affirmative action in employment of the handicapped. The population of concern here seems to be somewhat narrower than that protected from discrimination. Surely it is not intended that an individual with a mild disability that is unlikely to cause an employment barrier should be "counted" for affirmative action purposes. Thus we recommend that the law use two different definitions for these two different groups. The current definition is appropriate to describe the population protected from discrimination, the disabled. However, in terms of affirmative action, a new definition is needed for the term "handicapped". We recommend that an individual be considered handicapped for affirmative action purposes if that individual's disability results in a substantial limitation in mobility, communication, learning, or self care[1] or limits the individual's ability to continue working in the area in which he or she is qualified.

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[1]These are the four primary functional areas included in the federal definition of severely disabled, PL 95-602. The other three functional areas included in the definition are economic self-sufficiency, self-direction, and capacity for independent living, all clearly limited by a substantial limitation in any of the first four.

These areas of limitation are considered to be factors that can be expected to affect an individual's employability. Thus, even if an individual receives special services, vocational training, or adaptive equipment, making that person more employable, it is still likely that the individual will either find it more difficult than a non-handicapped person to find employment, or, once employed, be less upwardly mobile than non-handicapped co-workers. These are the individuals that need special consideration during the hiring process. These are the individuals for whom reasonable accommodations are likely to be necessary and for whom affirmative action is needed to ensure equal employment opportunities.

Clarify the Definition of Reasonable Accommodation

One aspect of the regulation that has been difficult for industry to implement effectively, and has been a major focus of this study is the provision that calls for employers to provide "reasonable accommodations" to handicapped employees. The intent of this language is to prevent an individual who is qualified for a specific job from being turned away if he or she could perform the essential functions of the task with appropriate accommodation by the employer. The law further states that accommodations are not required if they would impose an "undue hardship" on the employer. There has been much controversy over what constitutes reasonableness and one of the study issues involved identifying the range of accommodations that employers currently consider reasonable. While the experiences and perceptions of employers vary greatly, there is one message that is clear. It is not possible to develop a workable definition of reasonable that can be used equitably out of the context of the individual case. Each case is unique and must be considered on its own merits.

The determination of the "reasonableness" of an accommodation is based on a judgemental assessment which takes into account not only criteria such as cost, projected impact on productivity, and other clearly measurable factors, but also aspects of the particular case, of the individual worker and his or her value to the firm and a number of other factors that reflect the particular circumstances. The key to developing guidelines for assessing what is reasonable is to develop a method for formalizing the judgmental assessment by specifying the factors that should be taken into

account such that there is a high degree of likelihood that different individuals applying the same criteria would come to the same conclusion. The list of questions in Figure 2, developed by Harold Russell Associates has been used by firms as they have sought to meet their obligations for providing reasonable accommodations and were highly praised by industry leaders at the 1982 Annual Conference of the President's Committee on Employment of the Handicapped. These questions can form the basis for formalizing the judgment of reasonableness. They do not imply that a single yes or no answer would automatically determine reasonableness, rather they supply a list of considerations that should be taken into account as the determination is made.

This approach can be further formalized, if DOL wishes to do so, by giving different degrees of consideration to different factors. Thus the answers to some questions, such as a "yes" answer to the question "Can it be demonstrated that the business cannot afford the accommodation?" may be weighed much more heavily than the answers to others, such as a "no" answer to the question "Is the device likely to be useable by other disabled individuals if the original employee leaves?" Some questions such as the latter one above may only be useful in the context of other questions, such as how long the employee is likely to be with the firm or how much the employee is valued by the firm. It is important to stress here that, however DOL chooses to use questions such as those in Figure 2, with or without specified differential weights or groupings, it is essential that both DOL and employers have a common understanding of the criteria to be used. Only then will it be possible for the reasonableness of accommodations to be determined on a case-by-case basis in a manner that is equitable and clearly understandable to all parties involved.

Clarify Information Requirements

Firms reported being confused about the kinds of records they are required to keep about their handicapped workers to comply with the provisions in the Section 503 regulations. Some firms interpret the regulations to mean that detailed documentation of the numbers of handicapped applicants and employees, their disabling conditions, their wages, promotion histories, etc., are required. One firm even documents the justification each time

Figure 2

Recommended Questions to Ask When Assessing Whether a Job Accommodation for a Handicapped Individual is Reasonable

General

1. Can it be demonstrated that the accommodation has an adverse effect on business (undue hardship due to effect on productivity)?
2. Can it be demonstrated that the business cannot afford the accommodation (undue hardship due to financial cost and expenses)?
3. Does the accommodation conflict with a valid federal or state law, regulation or standard impinging on job requirements, e.g. OSHA or architectural standards?
4. Does the accommodation conflict with a valid collective bargaining agreement?[1]
5. Is the accommodation a reasonable investment in the employee given:
   a. the value of the employee to the organization (monetary or otherwise)?
   b. the likely time the individual will spend in the job and future jobs requiring the same accommodation?
6. Will the accommodation enhance the ability of the organization to recruit individuals with similar handicapping conditions?
7. Is the accommodation likely to jeopardize the safety of other employees?

Building Modifcation (Example: Installing a ramp at the entrance of a building)

1. Is the removal of an architectural barrier considered a capital expenditure?
2. Does the modification improve the utilization of a building by all employees?
3. Does the modification limit the utilization of the building by other individuals?
4. If the modification limits the utilization of the building by other individuals, is it readily accessible?
5. Does the modification qualify for a tax deduction under federal law (P.L. 96-167 which extended the provisions of the Tax Reform Act of 1976 until December 1982)?

Worksite Modification (Example: Rearranging furniture or equipment to make the work area accessible to a person in a wheelchair.)

1. Does the modification limit the utilization of the worksite by other individuals?
2. If the modification limits the utilization of the worksite by other individuals, is it readily reversible?

Machinery or Equipment Modification (Example: Lowering a machine or workbench so that it can be operated by a person from a sitting position.)

1. Once modified, is the machine or equipment usable by other employees?
2. Is the modification readily reversible?
3. Is the modification likely to affect the productivity of other employees who use the machine or equipment?
4. If modified, will the machine or equipment continue to meet safety standards?

Aids and Devices (Example: Providing a dictating machine or tape recorder to accommodate a blind worker.)

1. Is the aid or device of a purely personal nature and not directly related to performance of the job, e.g., hearing aid?
2. Can the device be taken with the individual as he or she advances in the organization?
3. Is the device likely to be usable by other disabled individuals if the original employee leaves?
4. Does the device have a resale value if the original employee leaves?
5. Will State Vocational Rehabilitation agencies or consumer organizations provide the device free or subsidize its purchase?

Personal Assistance? (To enable a person to understand work directions and/or instructions. (Example: Providing an interpreter for a deaf individual.)

1. Is the reader or interpreter able to perform other job duties in addition to assisting the disabled individual?
2. Will other employees be required to take time away from their jobs to assist the disabled individual?
3. Is the assistance provided by an aide of a purely personal nature or is it related to performance of the job?

Modification of Job Tasks (Example: Allowing a mobility-impaired sales worker to conduct some sales calls over the telephone rather than in person.)

1. Do other employees in the same unit do the same or similar jobs?
2. Does the job task modification require that other employees accept additional job duties?
3. Would the individual have to perform all job duties if one or more employees in the same job were absent?

Modification of Work Hours or Schedule (Example: Allowing a diabetic employee to take regular meal breaks during a shift or instituting a "flextime" schedule.)

1. Does modification of the individual's work schedule affect the productivity of self or other employees?
2. Does the schedule modification conflict with company work rules or personnel practices?

Special Privileges (Example: Allowing a mobility impaired employee to park in a restricted parking space near the work area.)

1. Does the additional privilege conflict with company work rules or personnel practices?

Job Restructuring (Example: Creation of an "Aide" or "Assistant" position.)

Job restructuring describes the formal process of examining the relationship of a number of jobs within an organization and through the application of job analysis, rearranging the tasks performed in these jobs to achieve the organization's goals. Job restructuring is commonly used to create entry level jobs by separating out certain tasks of other jobs and combining them into new jobs. Another purpose of job restructuring is to eliminate dead-end jobs and create job ladders so that workers can advance to a position of greater responsibility, skill and pay.

Job restructuring opens up new opportunities for employment and benefits handicapped workers in the same manner as other workers. Job restructuring is generally not used to accommodate an individual handicapped worker, except where no alternatives are available.

[1] Regulations issued pursuant to Section 503 of the Rehabilitation Act of 1973 do not exempt employers bound by a collective bargaining agreement from the requirement to provide reasonable accommodation. If covered by Section 503, you must notify unions of the company's obligation to take affirmative action toward handicapped workers...including your obligation to make reasonable accommodation. If a revision of your collective bargaining agreement is necessary to comply with this requirement and you cannot facilitate such revision yourself, the union may then make their views known to the Director, Office of Federal Contract Compliance Programs, Department of Labor, who is required to use his or her "best effort" to assure that the union cooperates and [illegible] you in meeting your affirmative action obligations.

a disabled applicant is not interviewed or hired. Few firms, however, keep records of number of applicants, number of handicapped workers, or accommodations provided, and even fewer keep such information in a centralized location where it could be accessed by government officials. Clearly, a certain amount of information would be useful internally for firms to evaluate the effectiveness of their own affirmative action efforts. However, as long as firms are unsure about how such information might be used by the government, most firms will resist collecting such information even for their own purposes.

We recommend that DOL specify more clearly the exact recordkeeping requirements that are necessary for compliance with the regulations. These requirements should be the minimum necessary to document that firms are actively engaged in seeking to hire and accommodate handicapped workers. Should DOL decide to increase government enforcement efforts, it will, of course, be necessary to collect such information through the institution of reporting requirements. However, we recommend that firms be advised to keep such records for their own purposes and as documentation in case of compliance review, rather than as a reporting requirement to the government. We suggest the following information items as minimal but sufficient to document compliance:

- number of handicapped employees by job category;
- number of accommodations provided by type of accommodation; and
- evidence of outreach and recruitment activity.

For internal purposes, firms would probably find it useful to keep such records by division or department, also. In fact, one of our case study firms even reviewed affirmative action performance by each individual management unit as one of the aspects of managers' performance reviews.

The major sources of information available to employers about the handicap status of employees, apart from those with the most visible handicaps, are the self-identification process and medical records. Large industrial firms often have their own in-house medical staff who provide management with information about work limitations and medical restrictions due to various medical conditions. Case study firms who included all employees with medical restrictions in their count of handicapped employees agreed

with our assessment that this caused inflation of their numbers by including individuals with minor limitations that did not substantially limit work tasks. This problem can be alleviated by providing employers with a clear definition of who should be included in the number of handicapped as mentioned in our earlier discussion. On the other hand, the self-identification process substantially under-reports the number of handicapped employees because many handicapped individuals, especially those with hidden disabilities, tend not to self-identify. Fortunately, many firms do not rely on self-identification as the sole indicator of the need for accommodation. In firms providing accommodation, an average of 45% of handicapped workers were reported as being provided accommodations, even though only 10-20% of handicapped workers tended to self-identify. However, it is still important to encourage handicapped workers to self-identify, both to protect their future rights and for the sake of helping handicapped workers in general by helping sensitize employers to the prevalence of disability among their work force. One suggestion for increasing response rate and ensuring that disabled workers are familiar with their rights is to include in the invitation to self-identify some language that indicates, "You are not protected by Equal Employment Opportunity laws unless we know of your handicap." Another suggestion for encouraging disabled workers to self-identify is to ask if individuals would "be willing to be called upon as a resource to help other disabled workers or participate in disability awareness training for supervisors and coworkers."

RECOMMENDED AREAS FOR FUTURE STUDY

The current study of accommodation practices cannot determine the kinds of accommodations that may be needed by workers who are not employed. An accommodation policy aimed at securing the employment of all work-ready disabled individuals could well be very different from an accommodation policy for the disabled already integrated into the work force. Substantial accommodation could conceivably be needed by those who have applied for jobs and not been hired, or by those who have not applied for work at all. To investigate these needs one should not sample firms or currently handicapped workers, but rather should sample those work-ready handicapped trainees emerging from schools, government rehabilitation and training programs,

community mental health centers, or other settings, and then trace the experience of such workers in seeking jobs with different employers. This would require an additional study, but one which is important to undertake if the full need for job accommodation of the handicapped is to be understood.

The recommendations in this report have focused on a voluntary compliance approach to implementation of affirmative action programs for the handicapped. As mentioned earlier, this may be especially relevant to this population because of the perception of industry that hiring the handicapped, and making the necessary accommodations to do so, is good business practice. In this study we have gathered firms' perceptions that handicapped workers are especially good employees, including employers' impressions that handicapped workers have high productivity, low turnover, low absenteeism, and high motivation. We have also recommended that information about hiring the handicapped as good business practice be disseminated to firms to encourage them to comply voluntarily with affirmative action regulations. This study has not, however, gathered data as evidence of productivity, turnover, absenteeism, or motivation factors. Such data would be extremely valuable to DOL in its affirmative action and enforcement efforts. If DOL could provide to firms concrete evidence of the advantages of hiring disabled workers, efforts to encourage voluntary compliance would benefit substantially.

As the current tight economy has reduced hiring opportunities in many sectors of industry, affirmative action efforts have necessarily begun to turn from recruitment and hiring activities towards the upward mobility of existing employees. For most firms this is a relatively new area of focus in terms of handicapped employees. Study findings showed little correlation between the provision of accommodations and upward mobility, and pointed to the need for the issue of upward mobility to receive special attention if it is to become a reality for handicapped workers. This study did not focus on upward mobility as a study issue, but we did discover that it is an area that needs further exploration. Once again, a case study approach may shed light on successful practices that can be shared by more experienced firms for the benefit of all employers.

ATTACHMENT I

SUMMARY OF METHODOLOGY

SUMMARY OF METHODOLOGY

STUDY DESIGN

The design of this study has evolved and grown since the initial proposal, as project staff have become increasingly knowledgeable about the nature of respondents' concerns and views about the issues to be examined. As initially presented in the RFP, this study was to be statistical in focus, exploring primarily the nature, extent, and costs of accommodations that have occurred, together with the impact of employer attitudes toward accommodation on their accommodation practices. BPA's original proposal expanded somewhat the scope of the study to include related employment practices that affect and are affected by accommodation practices. In addition, BPA proposed case study approaches in which processes and outcomes of accommodation would be examined. As the study matured and the informational and technical assistance needs of industry became clearer, the emphasis on examining accommodation processes and outcomes increased, and the number of detailed questions to be asked of each of the 2,000 firms in the basic statistical survey decreased.

The first phase of this project examined the appropriate methodology and instrumentation to be used in collecting the data. This involved instrument design, pretests, literature review, and securing the involvement and support of public and private organizations. This phase focused on the following:

- the anticipated availability of data;
- presentation of information requests in a manner most likely to elicit response;
- identification of data items most relevant to the central purpose of the study; and
- development of strategies for maximizing response rate, ensuring confidentiality and minimizing reporting burden on participants.

Literature and Policy Review

One of the early tasks in the design of the study was to review the current literature and other available information about accommodation issues. This research defined the scope of current knowledge about accommodation and sharpened the focus of the study. Information sources for this review included:

- federal regulations;
- administrative decisions;
- letters of findings;
- court cases;
- OFCCP survey of Employment Opportunity Specialists; and
- other studies of accommodation issues.

This review provided valuable insights into the issues to be explored during the study and served as an important source of input into the study design.

The Industry Advisory Panel

One of the most important sources of information during the design of the study was the Industry Advisory Panel, developed to bring industry and labor input into the study design. The role of the Panel included:

- reviewing information gathered to date;
- raising key issues and questions concerning accommodation;
- exploring definitions of reasonable accommodation;
- discussing experiences to date in making reasonable accommodation;
- discussing survey strategies and methodology;
- discussing safeguards to confidentiality of company information; and
- discussing strategies for gaining the support of federal contractors during the study.

The reactions of individual members of the Industry Advisory Panel to particular questions, to groups of questions, to surveys in general and this study in particular, and to the gathering of information by federal agencies were major determinant of the scope and the detailed components of the company questionnaire.

One of the most crucial lessons learned during the study related to the manner in which the study would be viewed by responding firms. Project staff had been aware that responses by firms to a mailed questionnaire would not be forthcoming without some prodding. The input from the Industry Advisory Panel was particularly instructive and provided a realistic view of the study's limitations and potentials. The panel sensitized BPA to the level of corporate uneasiness with government inquiries in general, and affirmative action-related inquiries in particular. Thus much attention was focused during the study design towards developing appropriate strategies for dissemination of instruments, ensuring confidentiality, minimizing reporting burden, and maximizing response rate. These concerns were largely focused on the company survey, since the other activities would involve a sub-sample of firms already showing themselves to be cooperative by responding to the initial survey.

The panel was able to provide valuable insights into the availability of data, industry concerns about potential uses of study results by DOL, and raised questions about the need for various data items that had been proposed. The panelists' advice was extremely valuable both to the study design as a whole and to the development of individual questionnaire items.

Sources of Data

The study utilized five types of questionnaires or instruments, each aimed at a slightly different sample, each with different levels of detail to be explored. These were pretested and revised as more was learned about the responses that could be expected. The five instruments were:

- The company questionnaire. This was designed to collect baseline statistical data on the frequency, types, and cost of accommodations that have been provided by federal contractors. In addition, questions were asked to determine the extent to which federal policy and other variables affect, or might affect, contractors' decisions with respect to accommodations. This information was collected from a nationally representative sample of 2,000 randomly chosen contractors in selected industries.

- The non-respondent follow-up interview. This study element enabled project staff to determine with some precision the reasons why some firms did not respond to the company questionnaire, and how non-responding firms compared with those firms that did respond in terms of number of handicapped workers and their experience with accommodations. It was administered by telephone to 47 firms which had indicated their intention not to respond to the company questionnaire. In addition, information on firm size and industry classification, from non-respondents' EEO-1 reports, was compared to similar data for firms that responded. As a result, more informed statements can be made as to how representative the data gathered from the company questionnaire were of conditions nationwide.
- The telephone case study interviews. During this portion of the study, project staff conducted intensive inquiries into specific accommodations identified from company questionnaire responses as meriting further study. Telephone interviews were conducted with representatives from 85 firms,[1] judged from their company questionnaire responses as having exemplary accommodation practices. The goal was to gather in-depth information regarding accommodation processes -- decision-making, planning, cost-estimating, and implementation -- as well as outcomes of accommodations and their effects on firms' overall policies regarding handicapped workers. The majority of questions related to the circumstances surrounding a particular instance of accommodation, with a few additional inquiries about the firm's overall experiences and policies.
- The ten on-site case studies. These were somewhat similar to the telephone case studies in the types of questions asked. However, the on-site interviews covered each topic area in more depth. Information was gathered about the firm as a whole, rather than solely about a single accommodation, and from several respondents in each case to gain insight from a variety of perspectives. The evolution of firms' employment practices with respect to handicapped

[1] For some of the firms in the on-site case study sample, these interviews were conducted during the actual visit to avoid placing a duplicative response burden on those firms.

workers (including both accommodation and related practices) was studied in detail and the dynamic processes of accommodations in actual use were observed first-hand.

- The worker questionnaire. This was distributed by those case-study firms agreeing to participate. It was distributed at the firms' option to any or all known handicapped workers. Workers were asked about themselves, their employment situations, whether accommodations had been made for them, and what the outcomes of these accommodations were from their point of view. Workers sometimes reported accommodations or special arrangements made for them of which management had not been aware (and vice versa); workers' views about accommodations and their outcomes sometimes differed from those of management. The data gathered from these questionnaires were used in conjunction with the data from both the telephone case studies and the company questionnaires to study the decision processes and impacts of providing job accommodations.

In addition to these five instruments, data from the EEO-1 tape for all sample firms was also used for background and comparison data about type of industry and size of firm.

Development of the Questionnaires

The company questionnaire began as a two-part document with (1) questions regarding firms' overall policies and experiences and (2) detailed questions regarding all handicapped workers. The reactions of the Industry Advisory Panel convinced project staff that the reporting burden associated with completing a separate form for each handicapped worker would be excessive. In addition, as each question was analyzed as to the possible uses of the information to be gained from responses, a large number were deleted or simplified. A variety of approaches to gathering information on the factors which encourage or discourage accommodation were tried. Two of these approaches were field tested. These results convinced project staff

that candid or meaningful answers to such questions can only be gathered on a self-administered questionnaire if they are asked in a detailed closed-ended format.

The non-respondent interview was likewise simplified, as it was seen more and more clearly that firms choosing not to respond to the company questionnaire would likewise be resistant to efforts to gather information by telephone. The resulting instrument was extremely brief and required a minimum of time and effort to respond.

The telephone case study design also underwent repeated revisions. As the company questionnaire was narrowed in scope, many of the questions originally asked therein were shifted into the case study format. It was then argued that these case studies should be planned as unstructured discussions, with individual questions varying according to the type of accommodation being examined and the personnel structure of the responding firm. However, the need to gather comparable information across firms, and to gather information that could be linked back to the company questionnaire responses for analytic purposes, dictated that a single interview guide be developed to be administered to all respondents. The decision to limit the scope of inquiry in the telephone interviews to the experiences surrounding a single accommodation was made because of the number of issues that must be explored in each case and the resulting burden of responding. In addition, the goal was to gather very specific data regarding accommodation processes, and narrowing the subject matter of discussion to a single accommodation helped to provide the focus necessary to do this effectively.

The on-site case study interview guides were developed as topic guides for interviewers to use in leading discussions on various issues. Interviews with EEO, personnel and management focused on company policies and practices in a broad sense and practices and decision factors involved in providing accommodations. In addition, three individual cases were explored at each site involving interviews with individual disabled workers, their supervisors, and any other staff that may have been involved in the hiring and/or accommodation of the individual. As more was learned from the phone case studies about the kinds of information these kind of interviews might generate, on-site case studies questions were revised. The first site visited served as a pretest for the topic guides, resulting in additional minor revisions.

The worker survey was designed as an anonymous self-completion questionnaire to be distributed to all known handicapped employees at the case-study sites and made available (through posted notices) to other handicapped employees who may not have self-identified. Questionnaires were returned directly to BPA in pre-paid envelopes provided. Questionnaires were made available in large print for visually impaired. The cover of the instrument included a list of consumer organizations urging workers to respond.

SAMPLE

Selection

The universe from which the sample was selected for this study was all those federal contractors with more than 50 employees and more than $2,500 in contracts within selected industries. The industry types studied were manufacturing, services, and finance, insurance and real estate, as defined in the Standard Industry Classification (SIC). After investigating several possible sampling frames for this study the sampling strategy chosen used the Equal Opportunity Employer's Information Report EEO-1.

The main sampling design issue was how to choose the 2,000 firms to receive the mailed Company Questionnaire. The samples for the remaining study components were all subsamples of the original 2,000 firms to which company questionnaires were sent. Thus it was crucial that the sampling method for the company survey ensure an appropriate distribution of firms to ensure a varied sample for the subsequent instruments.

Firm size was an important variable in sample selection, since firm size is an important policy variable. The importance of small firms is that a growing proportion of employment is in the service industry, where small firms are numerous. Indeed, recent national studies show that small firms provide a disproportionately large share of the new jobs added to the economy each year. However managers in small firms were considered likely to be among the least willing respondents, judging from the results of related national surveys. In addition, small firms were not likely because of sheer numbers, to have had extensive experience with handicapped workers. (The contract specifically excluded firms with fewer than 50 employees.

These firms do not appear on the EEO-1 data tape.) There was, then, a strong interest in obtaining adequate representation in the sample from both large firms (where the most substantive information about accommodations would be available) and small firms (where the need for guidance and technical assistance may be greatest).

Firm size was defined for the purposes of this study by the total number of employees in 1979. This measure was attached to the sampling frame and was consistent with the employment focus of the study issues. The sampling approach for this study was not to define discrete strata, but instead to sample firms "pps" -- i.e., to sample with probabilities proportional to size -- which is similar to treating the size variable as continuous. Using this approach, the likelihood of a firm being selected increased with the number of employees. So, for example, a firm of 1,000 employees was ten times as likely to be chosen as one with 100 employees. The use of this approach led to the largest firms being chosen with certainty and yielded an adequate number of smaller firms for analytic purposes. The sample for the company survey was thus selected by computer using a program that specified the above "pps" approach to selecting 2,000 firms from the EEO-1 data tapes supplied by DOL.

The sample for the non-response survey was selected by the interviewers as the company survey was in process. Every "n"th time the interviewer identified a refusal over the phone while conducting phone response prods, the non-response questions were asked. The non-response survey was also administered to a sample of firms who had not indicated a refusal but for whom sufficient time had elapsed that the firm was classified as a non-respondent.

The case study firms were selected from among the company survey respondents. The central selection criterion for the telephone case study sample was the nature of accommodations reported in the company questionnaire responses. Project staff identified instances of extensive, costly, innovative, typical, or otherwise interesting accommodations on an ongoing basis as company questionnaire responses were received. Some of these were selected with certainty as subjects for further study; thus the process of conducting the telephone interviews began while the company survey was still in progress. Others were retained as possibilities, pending more complete

responses. The most interesting firms were set aside for possible on-site visits. These included firms with a combination of characteristics including wide variety of accommodations, a large total expenditure for accommodations and/or accessibility, a number of different types of low-cost/no-cost accommodations, a large number of handicapped employees, thoughtful responses to experience and decision factor questions, and additional comments indicating a high degree of involvement in affirmative action for or experience in providing accommodations to handicapped employees.

Validity

As explained above, BPA systematically oversampled large employers. The strategy was to gain access to information about the largest possible number of handicapped employees while remaining as representative of the universe as possible. (It was anticipated, and it turned out to be true, that large firms would employ the largest numbers of handicapped workers.) An actual comparison of the sample of 2,000 firms to the 47,640 firms falling within the stated sampling guidelines is contained in Table I-1. This table shows the effects that oversampling large firms had on the representativeness of the sample. These effects may be summarized as follows:

- a slightly larger proportion of sample firms were on the East Coast located in the Northeast than was found in the universe;
- the sample contained a larger percentage of manufacturing firms than did the universe, with a corresponding lower percentage of service firms; and
- relative to the universe, the sample contained a slightly higher proportion of corporate headquarters and a lower proportion of corporate affiliates.

DATA COLLECTION

Survey Distribution

Information collected during the study design phase established the importance of directing the company questionnaires to the appropriate individual within each of the sample firms. It was anticipated that individuals identified on the 1979 EEO-1 data tape as having submitted

Table I-1

Characteristics of Sample and Universe

Measure		Distribution	
		Sample	Universe
Zip Code:	0-1	26%	23%
	2-3	18%	21%
	4-5	21%	18%
	6-7	20%	20%
	8-9	15%	18%
Industry:	Manufacturing	74%	60%
	Finance, Insurance, and Real Estate	11%	12%
	Services	15%	28%
Number of Employees:	1-199	30%	66%
	200-499	19%	20%
	500-999	12%	7%
	1000-1999	17%	3%
	2000-4999	13%	2%
	Over 5000	9	*
Status:	Single Establishment Employer	14.3%	14.3%
	Corporate Headquarters	15.0%	11.2%
	Establishment within Corporate Structure	70.6%	74.5%

EEO-1 reports to DOL would be the appropriate addresses for the survey. However, the data tape was found not to contain the necessary information, so the process of creating a workable mailing list became a major task to be accomplished before survey distribution could begin.

This process involved a number of steps, including:

- use of the Directory of Corporate Affiliations to identify the name, correct title, and telephone number for respondents within those firms that could be located using the directory;
- examining photocopies EEO-1 reports for the remaining firms to identify an appropriate certifying official at the establishment to be surveyed;
- telephoning firms for whom no name was identified in the previous steps to determine the appropriate individuals to whom the questionnaire should be sent.

Following the first two of these activities some of the remaining firms were sent questionnaires directed to an unnamed individual, but the difficulty this caused in conducting telephone follow-up brought about the third step mentioned above. While this was a lengthy and somewhat cumbersome process, the input of the Industry Advisory Panel and past experience with survey research indicated that without the identification of a specific individual within each firm the survey would have elicited a substantially lower response rate.

Surveys were sent with a cover letter explaining the purposes of the survey and a stamped return envelope. The concern for ensuring the confidentiality of responses was extremely strong, and resulted in BPA's designing a separate tear-out card, the only element containing identifying information for firms responding to the questionnaire. BPA created a master list of firms that was the only link between the identifying cards and the questionnaire responses. It was kept in a locked file and destroyed once follow-up was complete. These special security precautions were made largely in response to advisory panelists' expressed concerns about confidentiality.

The distribution of the company survey was done in several phases a week or two apart to allow for follow-up calls timed to correspond with minimum elapsed time since receipt of the questionnaire. As responses

were received, they were reviewed for potential inclusion in the telephone case study sample. Those identified as possibilities were copied and retained by project staff together with identifying information for those firms. (All other questionnaires were separated from the identifying cards and grouped for keypunching.)

Even in the early stages of receiving responses, some were identified with certainty as telephone case study subjects. Calls to those firms began soon after the responses were received. Others were identified as possibilities and retained for comparison with responses that arrived later. The telephone case studies, then, were conducted on a continuing basis during the period of time that company questionnaire responses were being received and prepared for analysis.

As the telephone case studies were being conducted, project staff made note of particularly interesting cases to be considered as on-site case study possibilities. These were analyzed carefully and discussed with the Project Officer before a final decision was made. Those firms chosen were contacted, and their willingness to participate ascertained. Firms' cooperativeness was particularly important, since confidentiality was not promised to on-site case-study subjects.

During the early contact with potential case-study firms to secure their further participation in the study, firms were also asked to distribute the worker survey to their handicapped employees. Methods for distribution were discussed with each firm. Firms were asked both to distribute questionnaires to all known or self-identified handicapped employees and to make them available to other disabled employees in one or more centralized locations with posted notices. Some firms chose to use only one of the two approaches, while others used both. The worker survey was distributed with postage-paid return envelopes for ease in returning the questionnaire directly to BPA.

Maximizing Response Rate

Maximizing responses to the different components of the study was the strongest motivating factor for a number of activities described thus far. These activities included:

- assembling a knowledgeable and forceful group of representatives from industry to serve on the Industry Advisory Panel and to assess realistically the effects of individual questions and groups of questions on contractors' willingness to respond;
- meeting, not once but twice, with that panel to review two different drafts of the company questionnaire;
- weighing carefully the comments of panelists regarding response burden and other possible deterrents to response against DOL's need for information;
- adjusting the study design and even deleting information items specifically mandated in the RFP in response to panelists' concerns (this was done, of course, with the Project Officer's consent and at his direction);
- making revisions in the wording of individual questions, both in order to make clear the reasons for asking the questions and in order to minimize adverse reactions;
- careful attention to the visual design of the questionnaire, including extremely simple instructions for mailing it back to BPA;
- providing strong safeguards for the confidentiality of responding firms together with multiple mechanisms for informing firms about those safeguards;
- maintaining contact with several Industry Advisory Panelists on an ongoing basis to review subsequent changes in the questionnaire design in response to their comments;
- directing the questionnaire initially to a chief executive officer or other policy-level official within each firm, in order to minimize the number of steps the questionnaire must go through before approval to respond was granted;
- actually changing somewhat the focus of the study as a whole, eliminating in fact as well as in presentation some monitoring- or compliance-oriented aspects of the study;
- posting notices about the study in publications distributed by industry organizations and/or frequently read by business executives;
- making organizations such as the U.S. Chamber of Commerce aware of the study; and

- structuring carefully the data collection process for each of the surveys to include several steps to increase the response rate.

The last of these merits further discussion. For the company survey, first, a brief initial telephone follow-up call was made to each respondent within a few days after he or she received the questionnaire. Planning for these calls emphasized personalizing the presentation of the study, encouraging response without appearing coercive, openness to answer questions the respondent posed, and brevity in order to show consideration for the value of his or her time. Second, the response status of each firm was carefully monitored, with additional follow-up calls timed for maximum effectiveness. Third, firms not responding after a several-week period were sent a repeat mailing to remind them to answer, along with another copy of the questionnaire. Finally, those firms noted as being likely to respond, on the basis of interviewer judgment after the initial telephone call, that had not sent responses after the repeat mailing received a reminder postcard.* During these follow-up steps, as some firms declined to participate, a sample of 47 firms was selected to be asked the non-respondent follow-up questions. These cases formed the basis for much of the analysis of response bias described in detail in Attachment II of this report.

Other steps taken to maximize the response rate included training of all interview personnel in the goals of the study, the kinds of concerns they were likely to encounter, methods for encouraging participation in the study.

Securing the commitment of firms to participate in the phone interview included making firms aware that their situations were viewed as exemplary, that the particular focus of this study phase was to gather information that would benefit other firms in addition to providing information to DOL, that confidentiality would be maintained, and that the scheduling of the interview would be at their convenience. Also, the personal contact involved in setting up the interviews was helpful in encouraging response and enabled project staff to prepare respondents for the types of questions that would be asked, so that any additional information gathering necessary could occur in advance of the interview, or a referral could be made to other respondents.

During the conduct of the case studies, cooperation was secured in administering the worker survey. Since this was an anonymous survey, once the questionnaires were sent to firms for distribution, project staff would have no further opportunity to encourage response, so steps to maximize response rate were necessarily made prior to distribution. These steps included:

- development of a questionnaire that was brief and relatively simple to complete;
- producing the questionnaire in large type for visually impaired respondents;
- inviting respondents to reply via cassette or collect phone call if easier for them;
- securing the support of a number of consumer and advocacy organizations whose names were cited on the cover page of the questionnaire as urging workers to respond;
- urging firms to distribute individually to known handicapped through notices in workers' mailboxes, or together with timecards or paychecks, or personal contact by a supervisor; and
- providing firms with copies of a notice that could be posted to announce the study and availability of questionnaires to handicapped workers who may not have been known to management.

Thus it can be seen that all the steps of the survey process from instrument design to data collection included efforts to maximize the response.

DATA ANALYSIS

Since the study design includes both quantitative and qualitative data, procedures relevant to both types of analysis were used. The majority of the data was subjected to statistical analysis both hand-tabulated (telephone survey) and by computer (company and worker surveys). The data gathered from on-site case studies were analyzed on a firm-by-firm basis, resulting in the ten case studies included in Volume II of this report. The results of these visits were also hand-tabulated and compared across firms, as were the answers to open-ended questions and additional comments from the other instruments. These were examined in detail and analyzed by project staff.

The pages that follow describe briefly the procedures we used in coding and editing the data gathered, preparing the data tapes, processing the data, and conducting the analysis.

Editing and Coding the Responses

The company questionnaire and the worker questionnaire responses were edited as soon as they were received by BPA. This enabled project staff to identify quickly any missing or ambiguous item responses and allowed the flexibility of an additional phone call, if necessary, to clarify the response. A single Research Assistant was assigned the responsibility of editing all responses to each survey to ensure consistency in the editing process. Responses were checked both for completeness and internal consistency. The editor was thoroughly trained and knowledgeable about the range of responses to expect for each question, and how to interpret or handle instances of non-response. Following the editing process, questionnaires were re-edited by a second individual for accuracy.

Editors were also trained to post-code items where response did not fit the coding scheme, open-ended questions and responses in "other (specify)" categories. Coding instructions were reviewed and revised after the first few questionnaires were edited and double coded.

Keypunching and Verification

All data collection instruments intended for computer use were then keypunched and verified. Keypunching was done by an outside contractor, which verifies 100% of the cards, eliminating virtually all keypunch errors.

After the data was punched, preliminary computer runs were done to further check for possible errors. Initially, a check of identification numbers and card numbers was made to ensure that the correct number of cards were punched and in the correct order. A complete examination of all characters for each variable was then made. Thus, all out-of-range values and unusual response patterns were discovered.

Statistical Analysis

The computerized statistical analysis of the data relied principally on the Statistical Package for the Social Sciences (SPSS). This is an

extremely common and widely used package incorporating a variety of procedures. The first step was to produce simple frequencies of responses to each of the questions. These were reviewed and interesting patterns noted. The next step was to create additional variables that would be used in the more detailed analysis (such as percent federal contract revenues and percent of workforce handicapped). Then, crosstabulations were run to respond to study questions asked in the RFP. Additional crosstabulations were done as other patterns and issues emerged throughout the analysis of the data. Findings from the computer analysis were compared with the findings of the hand-tabulated and qualitative data, to identify further areas of analysis.

Qualitative Analysis

As mentioned above, the responses to open-ended questions and additional comments from each of the surveys were compiled and analyzed for major trends and notable examples.[1] The major sources of qualitative data, however, were the on-site case studies. These case studies involved in-depth discussion on a variety of issues with different respondents to gain a broad perspective on the issues from different points of view. Immediately on returning from the field, site visit staff completed a brief checklist of overall impressions and perceptions while the information was still fresh in mind. Staff then reviewed site visit notes to focus on the major strengths and lessons to be learned from each site. Site-visit staff debriefed by group discussion of overall perceptions specific practices and contrasts between sites. Case studies were written to summarize the approaches and highlight the outstanding features of each site.

In the most general sense, the information gathered in this study consisted of the frequency and type of accommodations that have been provided, their costs and outcomes, the methods used, and the decision factors that affect accommodations, both actual and potential. The hypotheses

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[1] Many of these comments are included in the discussions of telephone interview and case study findings (Attachments 4 and 5).

tested were numerous; they relate to the types of firms providing accommodations, the types of employees for whom they were provided, the factors and practices involved, and their results.

ATTACHMENT II

PARTICIPATION AND NON-PARTICIPATION

IN THE STUDY

PARTICIPATION AND NON-PARTICIPATION IN THE STUDY

COMPANY SURVEY NON-RESPONSE

The extent to which the results of this study can be used to make generalizations about the prevalence, types, and costs of accommodations for handicapped workers depends, in part, on how well the sample reflects the population from which it was drawn. A comparison between non-respondents and respondents indicated the size and direction of any possible bias in the data. Differences in terms of type and size of firms, firms' experiences with accommodation, and the number of handicapped employees, if they were significant, would have created an expectation that the sample was not representative of the total population.

Response Expectations Prior to the Survey

A review of the survey research literature, discussions with industry representatives, and BPA's previous survey experience revealed a number of possible reasons for non-participation in the study, and an expectation of significant response bias. They included the following:

- firms were not likely to see any direct benefit to themselves from responding;
- firms resisted participating in government sponsored studies because they feared government intervention;
- some firms perceived this study as having implications for affirmative action enforcement; they had doubts about confidentiality and feared that responding would result in closer scrutiny by the Office of Federal Contract Compliance Programs;
- Firms not placing a high priority on accommodation practices for the handicapped did not want to bother responding;
- small firms often did not have experiences they considered worth reporting;

- large firms did not want to undertake the burden of reporting the numerous accommodations they have made; and
- a large number of firms lacked available or centralized data on handicapped workers and accommodations.

Reasons for Analyzing Non-Response

A bias in the responses does not necessarily invalidate the study's results. Indeed examining the reasons for non-response was tremendously important in the interpretation of the information gathered in the completed questionnaires. In fact, many companies that did not respond exhibited the same attitudes towards accommodations as did respondents. Both groups seemed to consider accommodating the handicapped as a routine part of the employment process. For many of the non-respondents, the process was so routine that they kept no record of it. The following comment demonstrates this attitude:

> "Long before the advent of handicapped legislation, [we were] hiring handicapped individuals because they were considered valuable employees. [This was] such a commonplace occurance that we never took special note of any of the accommodations which were being made. We therefore have never instituted a system for gathering the information you require."

The process of creating a record for the purpose of participating in this study was seen as unduly burdensome or not in the firm's best interest.

There was only a limited basis for comparison between respondents and non-respondents. The information available to BPA for both respondents and non-respondents was company size and type of industry. (Some non-respondents did mention experience with accommodation in letters or in the non-response survey but the information is not complete enough to compare with the respondents in any way.) These data have been analyzed in order to identify bias in the response according to firm size and industry type.

Comparison of Respondents and Non-Respondents

The first comparison was done by company size (Table II-1). A strong response came from the smallest firms (less than 100 workers) probably, at

least in part, because they found the data easier to collect. Moderately large firms (1,201 - 1,600 workers) and the very biggest (5,000 - 40,000 workers) also represented a percentage of the respondents that was higher than the percentage in the sample overall. There is no simple explanation for this. The erratic nature of the response rate relative to firm size indicated that this variable was not a very significant factor in determining whether a company would participate in the study. It also showed that there was not an overwhelming bias toward a particular size of company within the sample.

A breakdown of respondents by industry showed the manufacturing sector responded at a rate below their proportion of the total sample (Table II-2). Both the finance, insurance and real estate (FIRE), and the service sector, conversely, had higher response rates. It is possible that the organizational structure within these sectors resulted in a record keeping procedure which made it easier to provide the requested information. The low response rate of manufacturing was even more pronounced in the analysis of response within each industry (Table II-3). However, the potential for a bias towards FIRE and service companies is offset by manufacturing being a much bigger part of the sample to begin with. The issues of weighting the sample in this direction are discussed more fully in the methodology chapter.

Overall, the comparison of respondents and non-respondents on the variables of company size and sector did not reveal any particular biases within the sample. There were other variables which did have an impact on the response rate but it was impossible to measure the extent of their influence. However, the following discussion on occasions for non-response will give an indication of the direction this bias took.

Results of the Non-Response Follow-Up Questionnaire

The non-response surveys were short and were designed to get only basic information from interviewees. They were administered randomly, and no permanent record was kept of which companies were included in the sample. Thus it was impossible to compare those surveyed with other non-respondents in terms of type or size of firm. Rather, the goal of the non-respondent questions was to get an indication of the reasons for

Table II-1

Company Size by Response Rate

Number of Workers	Percent Represented by Company Sizes Among:		
	Respondents	Non-Respondents	Total Sample
0-100	11.6%	8%	8.7%
101-600	41	40	40
601-1200	14	14.3	18
1201-1600	10.2	7	7.3
1601-5000	15	18.2	17.6
5000-40000	8.2	7.4	7.6
Total	100%	100%	100%

Columns may not all sum to 100 because of rounding error.

Table II-2

Type of Industry by Response Rate

Industry	Percent represented by each industry among: Total respondents	Non-respondents	Total Sample
Manufacturing	66.9%	76%	74%
Finance, Insurance and Real Estate	14.8	10	11
Service	18.3	14	15
Total	100%	100%	100%

Table II-3

Response to Survey by Type of Industry

Reaction to Survey	Type of Industry: Manufacturing	Fire, Insurance and Real Estate	Service
Responded	16%	24.8%	22.5%
Did Not Respond	84	75.2	77.5
Total	100%	100%	100%

non-response and the extent of experience with handicapped workers within non-responding firms. This, together with the data on those firms which was drawn from the initial EEO-1 tape, would establish the extent to which survey data are generalizable. See Figure II-1 for a summary of questionnare responses.

The five questions in the survey were designed to do two things. First they attempted to establish what happened to the questionnaire once it was received. This included finding out who handled the decision not to complete it and why. For the most part, the interviewers were able to contact the person who had received the questionnaire. They found that the vast majority of people remembered seeing it and that most of them had decided, on their own, not to participate in the study. Only in a few instances was the questionnaire referred to a superior for reaction or delegated to someone else. Only two people admitted to having lost the questionnaire or that they had intended to complete it but just hadn't gotten around to it.

Over one-third of the interviewers said they did not complete the questionnaire because they were reluctant to devote the time. Other principal reasons included company policy of never answering questionnaires, or a feeling that the questionnaire was irrelevant. The fact that companies had made accommodations for handicapped workers seemed to have little bearing on the reason for their non-participation in the study.

The second purpose of the questionnaire was to find out how many non-respondents had handicapped employees and whether they had made any accommodations. Almost three-quarters of the interviewees said that handicapped people worked in their company. Of these, half had made accommodations. An additional question specifically concerning building modifications revealed that about half the firms had also made changes in their physical plants to improve accessbility. Figure II-2 shows how firms with and without accommodation experience differed in their reasons for not responding.

When contrasted with the companies that did respond to the survey, this group had a slightly higher proportion of firms with no handicapped employees. Firms tended to complete the questionnaire more frequently if they had something to report. However, it was clear that factors other

Figure II-1

Reason for not responding	Number of responses from firms which: Have hired and accommodated handicapped workers.	Have not hired or accommodated handicapped workers or unknown.
Never answer questionnaires	2	4
Resistant to government inquiries in general	0	1
Doubts about purpose or validity of this particular study	1	1
Doubts about confidentiality	0	1
Felt that the study was not in the firm's best interest	0	2
Felt the study was not applicable to them	2	4
Lack of interest/no benefit to firm from study	0	3
Reluctant to devote the time	7	11
Other	2	3
Not sure	3	3

than the presence of handicapped workers influenced the decision to respond. These issues will be explored in more detail in the following section.

Reasons for Not Responding

Through informal phone conversations, letters, and the specific non-response interviews cited above, companies gave numerous reasons for not participating in the study. These comments can be grouped into several general categories, only the last of which overlaps with the reasons anticipated prior to conducting the survey. The categories included:

- conceptual problems with the study;
- concerns about the usefulness of the study;
- lack of staff to complete the questionnaire;
- concerns about how the data would be used; and
- other miscellaneous problems.

Conceptual Problems with the Study

The conceptual difficulties most prospective respondents encountered were not with the questionnaire or the study itself but with the broader issues of what is "handicapped" and what is an "accommodation". One employer who declined to respond offered the following illustrative comment:

> As you are aware, unlike the characteristics of race or sex, the issues involved in affirmatively dealing with handicapped workers are necessarily highly individual. The practices and procedures which may be effective for eradicating race and sex discrimination and fostering affirmative action for minorities and females are not necessarily transportable into the handicapped area. The attributes of sex and race are generic. Handicaps are specific. This fact, for example, presents a very real problem in attempting to answer questions such as those contained under 4 in the questionnaire [those regarding accommodation decision factors] Few, if any, of the questions can be answered on a "class" basis. Those questions are applicable only with respect to each individual handicapped worker.

Many non-respondents said that it would be impossible for them to list all of their handicapped employees because they were not identified

on personnel records. Some well-informed personnel managers pointed out that if all of their handicapped people did identify themselves, under the current statutes, eighty percent of the company could probably qualify. Others asked BPA to provide a definition of "handicapped" before answering any questions. They often wondered whether people with diabetes, high blood pressure, or epilepsy should be counted, pointing out the extreme ambiguity of the regulations. This ambiguity is further demonstrated by a few companies who thought "handicapped" referred only to the non-ambulatory. One such company stated: "We have no accommodations as our business is such where (sic) a strenuous physical (exam) need be passed as a consideration for employment. Most positions within our company are quite laborious (lifting, climbing, pulling, etc.)."

A similar problem exists in defining "accommodation." Frequently, individuals contacted thought that accommodation and accessibility were the same thing. They would decline to participate in the study because they only rented their space and could not make many physical changes. Or, they were in a brand new building that met all of the accessibility standards. The problems of definition are serious but they were expected. One of the initial reasons for conducting this study was to help clarify the meaning of "reasonable accommodation".

Officials in some firms appeared not to have devoted a great deal of attention to accommodation issues. They felt that the study was not applicable to them. Companies' concerns about the usefulness of the study were illustrated by a newsletter that was apparently circulated to many of the companies included in the sample. The respondent did not identify the source of the newsletter so it is not known with certainty how widely it was circulated. It took a hostile position towards the study stating: "...while well intentioned, it's not one of the U.S. Department of Labor's 'better ideas'". Without actively discouraging people, this may have caused some readers to ignore the study when they might have otherwise participated. Although the extent of its influence is unknown, the newsletter may have been a considerable factor in limiting the number of corporations that did respond to the study. The article pointed out that private industry views the issue of accommodation differently than DOL. This brings to light another conceptual problem with the study. The author perceived DOL

as being preoccupied with excessively detailed data. "The questions on modifications made to improve accessibility to all categories of handicapped persons (date, type, cost, and other information) were particularly disturbing to most employers we interviewed. Likewise, the questions dealing with individual accommodations made for known handicapped employees were apparently mind-boggling for most conscientious employers who wanted to be cooperative and accurate in their response to the survey." The article does go on to say: "We hasten to add that we are for studies, surveys and research which will in fact contribute to the more effective utilization of handicapped workers and to the elimination of unlawful discrimination." This attitude seems to indicate an interest in discussing new innovations in accommodations rather than merely counting up how many accommodations have already been made. The case studies and telephone interviews with companies who did participate in the study made this point even more clear. Firms were willing to make any accommodation necessary for a person who they knew would contribute to the company. If the contribution was significant enough, cost and other factors involved often became irrelevant. These companies were more interested in the qualitative issues while they often felt that DOL and the study focused only on quantitative information.

Lack of Staff to Complete the Questionnaire

In some cases EEO or personnel staff people did not want to complete the questionnaire because, although their company did have records of the information being requested, it was not easily transferrable to the requested format. Consequently the task of compiling the appropriate data would be extremely time consuming.

> "We regret that we will not be able to participate in the survey. To do so would result in a considerable burden on staff time as the information requested is not readily available."

Comments such as the following were typical:

> "Our EEO group is now in the midst of a major government auditing program in addition to our normal reporting obligations and, therefore, is unable to assume any additional non-mandatory assignments."

> "Inasmuch as our Company has received far more surveys than are possible for us to complete, we have been forced to limit our participation to those surveys which provide useful local employment information."

> "Based on the number and depth of questions included in the survey, we estimate that it would take many hours of staff time to research and address these questions properly. Since completion of this survey would place a considerable burden on staff, we regret to inform you that we will be unable to participate in this survey."

Other time constraints specifically related to economic conditions:

> "Due to the recent reduction on our staff, it is a request that we will not be able to comply with at the present time."

> "While we support programs for the handicapped and, in fact, have taken many steps within the Company to make this commitment real, we will not be replying to your survey. As a matter of Company policy, we are focusing all energy on getting through the economic storm and, unfortunately, answering the many requests for information is one of the things we have elected not to do."

Staff shortage was a particular problem for companies hard hit by the current recession.

> "I am sorry to inform you that we cannot participate in your survey. We are currently in a constraint staffing situation because of the poor economic climate."

The corprate head of personnel at a large corporation said over the phone that he supported the study and would have completed the questionnaire if this were the "good old days". However time constraints and the company's financial problems prohibited his participation at that time. Other follow-up phone calls revealed that layoffs in some companies had resulted in the loss of jobs not only for the handicapped but also for personnel staff specializing in equal employment.

Lack of Data to Complete the Questionnaire

Many companies declined to participate simply because the data requested were not available. They typically stated a strong commitment to affirmative action and to making accommodations for the handicapped. However specific records were either not kept or were spread out among divisions or branch locations of the company. Such comments were typical of large and medium-sized corporations who report being in compliance with the regulations but lack any centralized record keeping system to document their activities. Because affirmative action plans do not require specific information on numbers of handicapped employed and accommodated, corporate EEO staffs have no reason to collect the data. (Indeed they may have a strong incentive not to collect data: if they don't have it, it cannot be used against them by enforcement officials.) Several letters indicated a similar pattern:

> "It has been our experience that most handicapped persons enter the job market fully prepared. By that I mean they provide the necessary accommodations themselves. Although we are prepared to provide reasonable accommodations, we have had nearly no requests forwarded to my office for consideration. Many minor accommodations are made without being brought to my attention. But then this is true for non-handicapped employees as well. Many physical alterations were made to our premises at the time we were moving to comply with OSHA."

> "In surveying for handicapped employees we do not ask for the specific handicap the employee has. As to the data we have, we feel the number of employees who identify themselves as handicapped is short of the number who qualify but do not consider themselves handicapped."

> "After reviewing the information requested, it will not be possible for us to participate because this information has not been retained in any systematic way."

> "Our General Offices as well as each of our establishments has an affirmative action plan for disabled persons, hires disabled persons, and makes accommodations as necessary. However, we have not centrally maintained or permanently retained the types of information you are collecting. I am sorry not to be able to be of help to you."

EEO officials often become involved with accommodation issues only when a complaint has been filed. Thus, they are often not aware of the

kinds of actions individual managers are taking to accommodate handicapped workers.

Concerns About How the Data Would be Used

Several companies were afraid that information they released to BPA might be used for compliance review or other unstated purposes. Some people were also not sure that the questionnaire was appropriate to the objectives of the study. "What will be done with the data? Often data in federal studies we gathered for purpose X and used for purpose Y - inappropriately and with inaccurate or misleading results." Some non-respondents expressed doubts about the appropriateness of a special study to the stated policy purpose.

> "While we recognize the potential value that a survey of this nature can have regarding the Department of Labor's regulatory policies, we would prefer to express our concerns and recommendations through the channels that are normally provided when regulatory action is proposed. Therefore, we are respectfully declining your invitation to voluntarily participate in this survey."

Other Miscellaneous Problems with the Study

Some other typical reasons for not participating in the study were:

- BPA is a private firm and was not known to them;
- companies saw no benefit for themselves in participating;
- some people did state that it was a company policy not to respond to questionnaires at all;
- companies felt that the information being requested was confidential.

Confidentiality was of particular concern to a number of firms, though the reasons for concern seemed to vary.

> "While committed to affirmative action programs, policy restrictions in dealing with sensitive issues do not permit our participation in your survey at this time."

> "We have reviewed the questionnaire that you have submitted and based on the confidential nature of the questions, we do not plan to complete the questionnaire. It is our responsibility to maintain confidentiality of our employees' health and handicap status."

> "We regret that, because of the number received, time required to complete and frequent requests for confidential information, we have had to establish a company policy of not responding to any questionnaires."
>
> "Our Corporate Policies and Procedures prohibit us from revealing cost and revenue information to many outside sources. Also, we have had difficulty in our endeavors to convince in-house workers to come forth to declare handicap status voluntarily."
>
> "...we fully comply with all Department of Labor requirements applicable to the employment of handicapped individuals. However, we do not deem it appropriate to participate in this survey inasmuch as the data requested is confidential and not disclosed to individuals outside the corporation unless such disclosure is required for legal purposes."

Only one company, when contacted by telephone, admitted to doubts about BPA's sincerity in assuring that confidentiality would be respected. The very fact that they had received a follow-up call was cited as evidence that their identity was known, and thus that responding would be dangerous.

Such concerns are typical of this kind of survey research and BPA staff anticipated them prior to undertaking the study. Although they are legitimate concerns, they reflect the general problems associated with conducting surveys for the federal government rather than the more specific issue being considered in this study.

By far the largest group of non-respondents (over 80%) never acknowledged an intent or decision not to respond. The largest group of these requested that a new copy of the questionnaire be sent, stating that the original had been lost, but that they intended to complete the replacement questionnaire when it arrived. A number of others (approximately 15% of all non-respondents) stated clearly that they intended to return the completed questionnaire.

Remedies for the Problem of Non-Response

The large number of companies who didn't complete the questionnaire but said they did make accommodations indicates that some valuable data is missing from the study. Analysis of the type of companies that participated shows there was a definite bias from middle-sized or large companies, especially those that depend heavily on federal contracts.

This suggests that adequate information from the very largest corporations was not obtained. Based on experience gained in conducting this study, there are two remedies for this problem which can be tried in doing further research. First, since large corporations are very bureaucratic, an effort should be made to establish personal contact with the appropriate individuals in each firm before sending out the questionnaire. They should understand the purpose of the study and be given a sense of personal involvement. This will ensure that when the questionnaire is sent, someone will have a commitment to completing it and returning it.

Secondly, large corporations should not be asked to report information for multiple locations. The sampling procedure used resulted in a larger number of questionnaires being sent to divisions of some large companies than could reasonably be expected to participate. There was also misunderstanding on the part of some corporate-level officials; several refused to participate because they thought they were being asked to provide data for all of their branches nationwide. When such misunderstandings were discovered, they were quickly eliminated. However, some confusion may have persisted of which BPA was unaware.

Conclusion

Data from the comparison of non-respondents and respondents does indicate that there is bias in the study results. It appears that the least likely to respond were large corporations who are not primarily dependent on the government for business and are not part of a closely regulated industry. All of the corporations in the sample are federal contractors. However, some are more dependent on the government for business than others. The analysis of the data seems to show that companies who do more business with the private sector are less likely to keep detailed records of accommodations made for the handicapped. A possible reasons for this is that they are less concerned about compliance reviews or the possibility of losing business due to an infraction of Section 503 regulations.

Although it is important to examine the reasons for survey non-response in order to interpret responses correctly, it is also important to examine

the implications non-responses might have for future DOL policy. It appears that data availability, rather than a lack of interest in accommodation issues, was the primary reason for not responding. Many companies stated a strong commitment to affirmative action and indicated that they make accommodations whenever necessary. Their feeling that the study was overly quantitative shows that for their own purposes, a different kind of information is needed than that requested in the study. Most companies are interested in finding more effective ways to utilize their human resources, and would be willing to work on this with the government. They are not, however, interested in having to produce more detailed statistics regarding their accommodation practices than they already collect.

TELEPHONE INTERVIEWS

Overall, there was a very high response rate (over 85%) for the telephone surveys. Companies were pleased to have their practices singled out as exemplary, as long as they could maintain their anonymity. Only a small percentage (between 10% and 15%) said they weren't interested in participating in this phase of the study. Several of those contacted, though wishing to be cooperative, didn't have the time to be interviewed. One company would have consented to an interview but all of their staff in the Personnel Department were involved in labor negotiations. If the timing of their negotiations had been different, they almost certainly would have participated. Several other companies didn't want to take part in an interview because didn't think they had done anything worth reporting. This confirms the study's overall finding that accommodations are often made routinely without companies' acknowledging that they were doing anything noteworthy.

In one case, the appropriate person agreed to be interviewed, but then became ill and was not expected to return to his job until after the study's completion. Another company preferred to respond to the interview questions in writing rather than verbally. They were willing to supply BPA with the information requested, but they wanted to be able to document what they said. This seemed to require excessive effort on their part, so the company was replaced in the sample.

WORKER SURVEY

The worker survey was considered an extra opportunity to gain information about the direct impacts of each company's accommodation policy. The data it provides, though informative, was not viewed as critical to the goals of the study. All companies interviewed over the telephone were asked to distribute the surveys, but if they didn't want to do so, no additional pressure was brought to bear. These companies were already being extremely cooperative and BPA's primary objective was not to jeopardize their good will in any way. As a result, over half (48) did not distribute the survey.

The primary reasons given for not distributing these questionnaires related to the issue of confidentiality. Companies were hesitant to create a situation where handicapped workers might have to draw additional attention to themselves. This issue was viewed by firms as particularly sensitive for employees who had not already identified themselves as handicapped. Other reasons included not wanting to take the time to distribute the questionnaires and a desire not to publicize the fact that the company was participating in the study.

In total, 791 surveys were sent out, and 161 were returned, a response rate slightly over 20%. Initially, each company had stated the number of questionnaires they wanted BPA to send them. It was not clear whether this number was based on an estimate or whether it reflected the actual number of known handicapped workers. In any case, companies that requested 15 or fewer questionnaires had a higher response rate than companies who requested a larger number. It is likely that this reflects situations where the personnel staff had requested only enough questionnaires to distribute to known handicapped workers and had personally distributed them or made a special effort to get them completed.

CASE STUDY PARTICIPATION

Fourteen firms were selected, based on their questionnaire responses, as case study candidates. The criteria were (1) notable accommodation activity, (2) thoughtful responses to remaining questions, and (3) any additional comments indicating that substantial effort had been devoted to the company's overall affirmative action program for handicapped workers.

When examining accommodation activity, attention was devoted not only to the number of accommodations, but to their costs, the job categories of the workers for whom they were made (was there a variety of jobs represented?), whether employees had been handicapped when hired and accommodated immediately, and whether they had been promoted since the time of accommodation.

Four of the firms contacted chose not to participate in the case study. In all four cases, the time burden of participating was the major factor in their decision.[1] In addition to the time burden, one company had concerns about maintaining confidentiality. They were very conscious of the fact that, though they have an exemplary accommodation record, there is still work to be done in the area of affirmative action for handicapped workers. Thus, they were not anxious to publicize their efforts, however, positively.

One of the firms that did participate in the case study also had severe time restrictions, but was able to work out a compromise so that a brief visit could be conducted. Though a smaller number of workers and supervisors than the usual three were interviewed, all basic information about the company's practices was gathered. In addition, follow-up telephone calls were made in order to verify the conclusions reached.

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[1]The time requested was in fact considerable; company staff were being asked not only to coordinate the visit and set up interviews with individual respondents, but also to accompany project staff throughout the two-day (in most cases) visit. The latter was generally required by company policy on visitors or internal security regulations. Finally, company representatives had to review the final written report and verify its accuracy before it could be submitted to DOL.

ATTACHMENT III

COMPANY SURVEY FINDINGS

(ADDITIONAL TABLES)

Table III-1

Percent of Employees Reported as Handicapped
by Total Revenues of Establishment

Percent of Employees Reported as Handicapped	Total Revenues of Establishment				Totals	
	0-9,999,999	10,000,000 to 59,999,999	60,000,000 to 99,999,999	100,000,000 or more	Number	Percent
0 Percent	36.2%	15.0%	27.6%	26.5%	104	28.3%
Under 3 Percent	35.0	45.0	41.1	39.8	143	39.0
3-5 Percent	16.2	25.0	20.7	16.3	68	18.5
Over 5 Percent	12.5	15.0	10.3	17.3	52	14.2
TOTAL	100.0 (160)	100.0 (80)	100.0 (29)	100.0 (98)	367	100.0

Table III-2

Number of Employees for Whom Accommodations Were Made[a]

Number of employees	Frequency of Response	
	Number	Percent
None	142	38.7
1	35	9.5
2	26	7.1
3	25	6.8
4	24	6.5
5	13	3.5
6	25	6.8
7	6	1.6
8	8	2.2
9	8	2.2
10-14	19	5.2
15-19	10	2.7
20-24	4	1.1
25-49	4	1.1
50-99	5	1.4
100-199	4	1.1
200 and over	4	1.1
TOTAL	367	100.0

[a]Source: Company Questionnaire Responses

Table III-3

Modification Not Needed or Infeasible

Type of Modification	Frequency of Response	
	Number	Percent Total Firms
Special parking, curbcuts	73	19.9
Ramped exterior entrance	101	27.5
Wide doorways, easily opened doors	85	23.2
Elevator	153	41.7
Audible and visible alarm system	138	37.6
Braille or raised markings	215	58.6
Lowered public telephone	169	37.9
Lowered drinking fountains	158	43.1
Access to bathroom facilities	97	26.4
Access to personnel, other offices	88	24.0
Access to general use areas (cafeteria, auditorium, etc.)	105	28.6
Other	20	5.4

Table III-4

Modification Provided versus Already Accessible

Type of Modification	Provided		Already Existed %	
	Number	Percent of Total Firms	Number	Percent of Total Firms
Special parking, curbcuts	137	37.3	141	38.4
Ramped exterior entrance	110	29.9	137	37.3
Wide doorways, easily opened doors	62	16.9	197	53.6
Elevator	39	10.6	149	40.6
Audible and visible alarm system	46	12.5	110	29.9
Braille or raised markings	28	7.6	21	5.7
Lowered public telephone	51	13.9	63	17.1
Lowered drinking fountains	48	13.0	69	18.8
Access to bathroom facilities	7	1.9	136	37.0
Access to personnel, other offices	59	16.0	196	53.4
Access to general use areas (cafeteria, auditorium, etc.)	32	8.7	205	55.9
Other	38	10.4	13	3.5

Table III-5

Extent of Accessibility

Number of Accessibility Modification Types Reported	Number of Firms Reporting	Percent of Total Firms
None	179	48.8%
1	42	11.4
2-3	59	16.1
4-5	34	9.3
6-8	36	9.8
9 or more	17	4.6
Total	367	100.0%

Table III-6

Date Accessibility Modifications Were Provided[a]

Date	Frequency of Response	
	Number	Percent
Before 1973	84	9.9
1973-1975	172	20.3
1976-1978	198	23.4
1979-1982	393	46.4
TOTAL[b]	847	100.0

[a]Source: Company Questionnaire responses

[b]This represents the total number of dates cited and thus excludes cases where facilities were already accessible or modifications were made but their date was unknown.

Table III-7

Industry Type by Accommodation Type[a]

Industry Type	Percent of Accommodations Whose Type is:[b]															
	Removed Barrier	Adjusted Work Environment	Adjusted Table, Desk	Other Rearrangement	Relocated Worksite	Modified Phone, Typewriter	Microfilm, Dictaphone	Other Special Equipment	Job Transportation or Mobility	Reassigned Tasks	Modified Work Hours	Other Modification of Work Procedure	Assigned Aides, Reader	Additional Training	Oriented Coworkers, Supervisors	Transferred to Another Job	Other Accommodation
Manufacturing	66.3%	76.0%	69.6%	78.3%	93.1%	51.8%	60.8%	69.2%	63.5%	66.9%	60.2%	76.1%	45.2%	59.8%	74.3%	89.2%	60.3%
Finance, Insurance, and Real Estate	14.0	11.1	9.6	10.9	3.4	21.4	30.4	16.5	7.9	13.4	14.6	12.0	25.8	19.6	18.2	6.3	7.8
Services	19.6	13.0	20.8	10.9	3.4	26.7	8.7	14.3	28.5	19.7	25.3	12.0	29.1	20.5	7.6	4.5	31.8

[a]Source: Company Questionnaire responses and EEO-1 tape.

[b]Percentages add down columns to approximately 100% (rounding errors).

Table III-8

Industry Type by Cost of Accommodation[a]

Industry Type	Percent of Accommodations Whose Cost Is:[b]									
	Zero	$1-99	$100-499	$500-999	$1,000-1,999	$2,000-4,999	$5,000-9,999	$10,000-14,999	$15,000-19,999	$20,000 or more
Manufacturing	71.2%	75.3%	77.0%	79.0%	81.5%	80.0%	88.9%	100.0%	83.3%	60.0%
Finance, Insurance, and Real Estate	13.0	15.8	9.2	7.0	5.3	2.9	0.0	0.0	16.7	0.0
Services	15.8	8.9	13.8	14.0	13.2	17.1	11.1	0.0	0.0	40.0

[a]Source: Company Questionnaire responses

[b]Percentages add down columns to approximately 100% (rounding errors).

Table III-9

Industry Type by Handicapping Condition of Accommodated Worker[a]

Industry Type	Percent of Accommodated Workers Whose Handicapping Condition is:[b]													
	Wheelchair User	Other Walking Limitations	Total Blindness	Other Impaired Vision	Deaf	Other Impaired Hearing	Limited Use of Arms	Impaired Speech	Cosmetic or Skin	Mental Retardation	Other Mental or Emotional	Respiratory Condition	Limitation of Activity	Other Condition	Condition Progressive
Manufacturing	64.4%	80.1%	48.1%	78.4%	59.5%	52.0%	83.3%	80.4%	95.4%	78.1%	73.7%	78.2%	68.4%	65.2%	68.0%
Finance, Insurance, and Real Estate	17.8	10.2	5.8	12.3	20.3	26.9	6.9	5.9	0.0	7.3	8.8	10.9	15.3	11.1	28.0
Services	17.8	9.7	46.2	9.2	20.3	21.2	9.7	13.7	4.5	14.5	17.5	10.8	16.2	23.7	4.0

[a]Source: Company questionnaire responses and EEO-1 tape.

[b]Percentages add down columns to approximately 100% (rounding errors).

Table III-10
Attitudes by Firm Size

Agrees that Accommodation:	Firm Size: Small Firms (less than 100)	Firms 100-499	Intermediate Firms (500-2000)	Large Firms (over 2000)	Significance
Attracts Dependable Workers	61.8% (34)	61.0% (100)	67.0% (85)	65.2% (66)	ns
Attracts Scarce Skills	30.8 (26)	31.9 (91)	36.3 (80)	34.4 (64)	ns
Handicapped - Less Turnover	45.7 (35)	61.1 (108)	49.5 (95)	41.4 (70)	.11
Handicapped - Good attendance/ punctuality	34.2 (38)	58.2 (110)	44.2 (95)	28.6 (70)	.00
Improved Safety	65.8 (38)	56.3 (103)	52.8 (91)	71.0 (62)	ns
Improved Promotability	48.4 (31)	36.4 (99)	41.6 (89)	36.4 (66)	ns
Improved Productivity	62.9 (35)	59.8 (102)	62.0 (92)	64.7 (68)	ns
Benefits Exceeded Costs	54.8 (31)	47.9 (98)	47.3 (91)	51.6 (66)	.12
Beneficial in Public Relations	66.7 (39)	80.4 (107)	74.7 (95)	75.0 (68)	ns
Done to Comply with Law	29.7 (37)	30.8 (107)	34.0 (94)	41.2 (68)	ns
Uncertain With High Turnover Occupations	15.6 (31)	21.6 (88)	13.9 (79)	15.3 (59)	ns
Uncertain for Applicants Lacking Strong Skills	34.3 (32)	30.6 (98)	29.2 (89)	27.2 (66)	.13
Discouraged by Unions	0.0 (20)	6.9 (72)	3.6 (57)	9.5 (42)	ns
Discouraged by Co-Workers	2.8 (36)	6.0 (99)	3.3 (90)	3.0 (66)	ns
Discouraged by Customers	3.2 (31)	5.8 (86)	5.3 (75)	1.7 (59)	ns
Infeasible in Some Worksites	45.9 (37)	47.4 (93)	44.4 (81)	58.3 (60)	ns
Estimated Costs Exceeded Estimated Benefits	28.6 (28)	18.7 (91)	22.3 (85)	25.0 (64)	ns
Costs Exceeded Projections	19.2 (26)	7.4 (81)	14.1 (85)	19.7 (66)	ns
Costs Are Prohibitive	11.5 (26)	13.0 (77)	11.7 (77)	15.1 (66)	ns

Table III-11

Attitudes by Type of Industry

Agrees that Accommodation:	Manufac-turing	Finance	Services
Attracts Dependable Workers	64.2% (187)	54.7% (42)	68.6% (51)
Attracts Scarce Skills	32.3 (173)	21.2 (33)	44.0 (50)
Handicapped - Less Turnover	53.1 (209)	50.0 (40)	47.3 (55)
Handicapped - Good attendance/punctuality	47.2 (212)	38.1 (42)	38.2 (55)
Improved Safety	58.4 (202)	51.4 (35)	68.6 (50)
Improved Promotability	35.3 (190)	55.5 (36)	40.7 (54)
Improved Productivity	60.7 (201)	65.7 (35)	62.5 (56)
Benefits Exceed Costs	47.9 (194)	54.5 (33)	50.0 (54)
Beneficial in Public Relations	75.0 (204)	68.2 (41)	80.7 (57)
Done to Comply with Law	33.5 (206)	36.6 (41)	34.6 (52)
Uncertain with High Turnover Occupations	14.1 (170)	26.5 (34)	22.9 (48)
Uncertain for Applicants Lacking Strong Skills	26.8 (194)	41.6 (36)	34.7 (49)
Discouraged by Unions	6.9 (145)	0.0 (12)	3.3 (30)
Discouraged by Co-workers	5.1 (196)	0.0 (34)	3.6 (55)
Discouraged by Customers	2.3 (172)	16.7 (30)	8.9 (45)
Infeasible in Some Worksites	52.3 (193)	17.8 (28)	54.3 (46)
Estimated Costs Exceeded Estimated Benefits	24.6 (187)	17.8 (28)	16.7 (48)
Costs Exceeded Projections	14.2 (176)	13.4 (30)	12.8 (47)
Costs are Prohibitive	15.6 (167)	3.2 (31)	11.9 (42)

Table III-12

Decision Factors by Proportion of Employees Who Are Handicapped

Decision Factor:		Firms with Few Handicapped Workers (less than 3%)	Firms With Normal # Handicapped Workers (3-5%)	Firms with Many Handicapped Workers (7%)	Significance
Attracts Dependable Workers	Accurate	60%	68.7%	73.8%	.15
	Inaccurate	15.2	8.6	2.4	.16
Attracts Scarce Skills	Accurate	33.6	39.2	39.0	ns
	Inaccurate	34.3	35.2	24.4	.13
Handicapped - Less turnover	Accurate	50.3	54.1	46.0	.16
	Inaccurate	18.3	13.1	8.0	.15
Handicapped - Good attendance/punctuality	Accurate	45.6	49.2	42.0	.04
	Inaccurate	22.4	15.8	12.0	.17
Improved Safety	Accurate	64.6	49.2	51.1	.02
	Inaccurate	10.4	18.0	2.2	.19
Improved Promotability	Accurate	37.9	42.8	44.2	ns
	Inaccurate	26.3	15.8	14.0	.14
Improved Productivity	Accurate	61.1	66.1	60.0	.05
	Inaccurate	9.1	8.1	4.4	.17
Benefits Exceeded Costs	Accurate	49.6	51.7	46.5	.0
	Inaccurate	11.5	13.3	2.3	..9
Beneficial in Public Relations	Accurate	71.1	69.8	86.7	ns
	Inaccurate	7.9	4.8	4.4	.12
Done to Comply with Law	Accurate	36.1	32.3	30.4	ns
	Inaccurate	51.3	61.3	60.9	.09
Uncertain with High Turnover Occupations	Accurate	15.7	20.0	11.2	ns
	Inaccurate	37.0	34.5	38.8	.09
Uncertain with Applicants Lacking Strong Skills	Accurate	29 7	29.3	33.3	ns
	Inaccurate	38.7	37.9	33.4	.13
Discouraged by Unions	Accurate	6.0	5.9	9.4	.19
	Inaccurate	71.0	73.5	81.3	.18
Discouraged by Co-Workers	Accurate	4.2	3.4	6.7	ns
	Inaccurate	85.4	95.0	84.5	.12
Discouraged by Customers	Accurate	6.3	0.0	2.6	ns
	Inaccurate	76.0	85.1	89.7	.13
Infeasible in Some Worksites	Accurate	47.8	44.3	50.0	ns
	Inaccurate	34.1	32.7	26.1	.08
Estimated Costs Exceeded Estimated Benefits	Accurate	26.4	28.6	7.3	.01
	Inaccurate	33.3	35.7	39.1	.21
Costs Exceeded Projections	Accurate	16.1	19.2	7.2	ns
	Inaccurate	31.5	46.2	35.7	.15
Costs Are Prohibitive	Accurate	19.8	8.8	5.0	ns
	Inaccurate	45.9	54.4	57.5	.16

Table III-13

Attitudes by Number of Accommodated Employees

Decision Factor:		Number of Accommodated Employees				Significance
		None	1-4	5-9	10 or more	
Attracts Dependable Workers	Accurate	26.8%	58.5%	64.4%	67.9%	.00
	Inaccurate	8.8	7.7	10.2	7.9	
Attracts Scarce Skills	Accurate	19.2	23.6	30.5	38.9	.00
	Inaccurate	20.0	20.8	38.9	24.1	
Handicapped - Less Turnover	Accurate	35.5	52.3	55.0	47.2	.00
	Inaccurate	7.2	12.1	16.7	17.0	
Handicapped - Good Attendance/ Punctuality	Accurate	29.9	44.9	50.0	43.4	.00
	Inaccurate	10.3	16.8	18.4	20.7	
Improved Safety	Accurate	46.4	48.6	51.7	61.1	.01
	Inaccurate	3.2	13.0	10.0	9.3	
Improved Promotability	Accurate	24.6	27.7	33.4	40.0	.00
	Inaccurate	33.3	37.3	46.7	29.9	
Improved Productivity	Accurate	37.1	66.4	63.4	53.7	.00
	Inaccurate	5.6	5.6	10.0	11.4	
Benefits Exceeded Costs	Accurate	20.3	52.8	57.6	49.1	.00
	Inaccurate	5.7	9.4	5.1	9.5	
Beneficial in Public Relations	Accurate	54.3	72.7	73.3	80.0	.00
	Inaccurate	7.0	5.[illegible]	5.0	1.8	
Done to Comply with Law	Accurate	31.8	23.4	28.8	41.7	.00
	Inaccurate	30.2	57.0	62.7	53.7	
Uncertain with High Turnover Occupations	Accurate	13.7	14.0	8.8	12.7	.[illegible]0
	Inaccurate	17.0	18.0	44.1	27.3	
Uncertain with Applicants Lacking Strong Skills	Accurate	20.8	27.3	29.3	23.6	.01
	Inaccurate	16.8	30.2	39.6	41.8	
Discouraged by Unions	Accurate	1.6	2.8	1.7	9.3	.02
	Inaccurate	33.1	44.9	45.8	44.4	
Discouraged by Co-Workers	Accurate	1.6	4.6	3.4	5.5	.01
	Inaccurate	62.9	74.8	79.7	89.1	
Discouraged by Customers	Accurate	2.4	3.7	6.8	3.7	ns
	Inaccurate	56.6	58.0	57.6	64.8	
Infeasible in Some Worksites	Accurate	32.0	39.3	48.3	40.7	.00
	Inaccurate	19.2	18.6	25.8	30.7	
Estimated Costs Exceeded Estimated Benefits	Accurate	11.2	20.5	24.1	18.5	.00
	Inaccurate	12.0	30.9	29.7	37.0	
Costs Exceeded Projections	Accurate	6.5	7.5	15.5	20.7	.00
	Inaccurate	11.4	32.7	38.0	35.8	
Costs are Prohibitive	Accurate	9.0	8.5	13.8	7.5	.00
	Inaccurate	23.5	34.9	46.5	58.5	

Table III-13a

Which is the Most Important Factor in Accommodation Decisions?

Most important factor is that accommodation:	Frequency citing factor as single most important		Percent citing as one of the most important
	Number	Percent	
Attracts Dependable Workers	90	24.5	36.0
Attracts Scarce Skills	18	4.9	16.9
Handicapped - Less turnover	20	5.4	14.4
Handicapped - Good attendance/punctuality	3	0.8	10.4
Improved Safety	31	8.4	29.4
Improved Promotability	7	1.9	13.1
Improved Productivity	30	8.2	24.8
Benefits Exceed Costs	9	2.5	11.7
Beneficial in Public Relations	6	1.6	14.2
Done to Comply with Law	33	9.0	21.8
Uncertain in High Turnover Occupations	4	1.1	2.5
Uncertain for Applicant Lacking Skills	2	0.5	3.5
Discouraged (Encouraged?) by Unions	0	0.0	0.8
Discouraged (Encouraged?) by Co-workers	1	0.3	0.5
Discouraged (Encouraged?) by Customer Reactions	0	0.0	0.8
Infeasible in Some worksites	16	4.4	11.4
Projection is that costs exceed benefits	13	3.5	7.9
Costs Exceeded Projections	1	1.6	8.2
No response	77	21.0	22.8
TOTAL	367	100.0	

Table III-14

Establishment Revenues in 1980

Amount of Revenues	Firms in Category	
	Number	Percent
$0-999,999	19	5.2%
$1,000,000-4,999,999	22	6.0
$10,000,000-19,999,999	19	5.2
$20,000,000-39,999,999	34	9.3
$40,000,000-59,999,999	17	4.6
$60,000,000-79,999,999	16	4.4
$80,000,000-99,999,999	13	3.5
$100,000,000-499,999,999	49	13.4
$500,000,000 or more	49	13.4
Not reported	100	27.2
Total	367	100.0%

Table III-15

Incentives by Firm Size[a]

Citing Strong or Some Incentive from Policy Option:	Number of Employees				Significance
	Small (under 100)	100-499	Intermediate 500-2000)	Large (over 2000)	
Tax Credit	83.3% (49)	80.9% (115)	64.9% (97)	61.8% (68)	.01 .17
Technical Assistance	69.8 (43)	63.4 (112)	63.5 (96)	65.2 (69)	ns. .08
AA Enforcement	62.5 (40)	55.4 (112)	57.0 (86)	65.2 (66)	ns .09
Placement Efforts	82.5 (40)	61.2 (104)	80.6 (93)	80.6 (67)	ns .12
Wage Subsidy	48.8 (43)	47.1 (102)	40.7 (86)	32.2 (59)	.03 .17
Provision of Training	64.9 (37)	63.8 (107)	65.2 (89)	57.1 (63)	.17 .14
Information	43.6 (39)	44.4 (99)	54.0 (87)	39.3 (61)	ns .10

[a]Source: Company Questionnaire responses

Table III-16

Incentives by Type of Industry[a]

Citing Strong or Some Incentive from Policy Option:	Manufacturing	Finance, Insurance, and Real Estate	Services	Significance
Tax Credit	76.9% (216)	71.7% (46)	55.9% (59)	
Technical Assistance	64.8 (210)	61.0 (41)	67.7 (62)	ns
AA Enforcement	58.8 (204)	52.9 (34)	61.0 (59)	ns
Placement Efforts	78.9 (199)	71.8 (39)	76.3 (59)	ns
Wage Subsidy	42.6 (190)	40.0 (40)	44.4 (54)	ns
Provision of Training	66.0 (197)	51.4 (35)	73.7 (57)	ns
Information	47.1 (187)	40.0 (40)	50.0 (54)	ns

[a]Source: Company Questionnaire responses

Table III-17

Incentives by Proportion of Employees who are Handicapped[a]

Citing Strong or Some Incentive from Policy Option:	Percent of Firms With			
	Few Handicapped Workers (Less than 3%)	Normal (3% - 5%)	Many Handicapped Workers (Over 5%)	Signi-ficance
Tax Credit	70.5% (166)	71.4% (63)	77.8% (45)	ns .06
Technical Assistance	66.0 (162)	61.7 (60)	52.2 (46)	ns .08
AA Enforcement	56.8 (155)	63.6 (55)	65.9 (44)	ns .09
Placement Efforts	72.4 (156)	84.9 (53)	80.4 (46)	ns .10
Wage Subsidy	35.8 (148)	48.1 (54)	57.5 (40)	.05 .14
Provision of Training	60.3 (151)	66.7 (54)	80.4 (46)	.08 .13
Information	46.6 (146)	49.0 (51)	47.6 (42)	ns .05

[a]Source: Company Questionnaire responses

Table III-18

Incentives by Accommodation Rate[a]

Citing Strong or Some Incentive from Policy Option:	Percent of Firms With:			Signi-ficance
	No or Few Accommodated Workers (less than 10%)	26%-50% of Workers Accommodated	More than 75% of Workers Accommodated	
Tax Credit	78.9% (57)	46.7% (30)	76.1% (92)	.03 .21
Technical Assistance	65.4 (55)	58.6 (29)	61.5 (90)	ns .15
AA Enforcement	64.5 (48)	70.0 (30)	46.7 (90)	.04 .20
Placement Efforts	78.0 (50)	85.7 (28)	76.5 (85)	.21 .17
Wage Subsidy	59.1 (44)	18.5 (27)	38.8 (85)	.11 .19
Provision of Training	77.8 (54)	37.0 (27)	70.9 (86)	.00 .23
Information	51.9 (52)	56.0 (25)	43.4 (83)	.10 .19

[a]Source: Company Questionnaire responses

Table III-19

Percent of 1980 Revenues from Federal Contracts

Percent Category	Firms in Category	
	Number	Percent
0-19%	219	59.7%
20-39%	21	5.7
40-59%	11	3.0
60-79%	9	2.5
80-99%	25	6.8
Not reported	82	22.3
Total	367	100.0%

ATTACHMENT IV

TELEPHONE INTERVIEW FINDINGS

TELEPHONE INTERVIEW FINDINGS

The telephone interviews were conducted with a selected group of companies with questionnaire responses indicating that at least one significant accommodation had been undertaken. The results of these telephone interviews are presented in this Attachment. In each case, the accommodation discussed during the telephone interview was the one which the respondent felt was most interesting or exemplary. The largest categories of accommodations were environmental and special assistance, with slightly over 30% of the accommodations discussed falling into each of these categories. The remainder were about evenly divided between equipment purchase and job modification. A detailed listing of types of accommodation is presented in Table IV-1.

Among the employees who had received these "best" accommodations, the largest groups consisted of blind persons and persons in wheelchairs. There was also a significant number of deaf individuals and persons with various mobility impairments. Relatively infrequent were cases in which mentally retarded individuals or persons with "hidden" disabilities had received accommodations significant enough to be included as subjects of telephone interviews. A listing of disability types is shown in Table IV-2. Over three-fourths of these workers were already disabled at the time they were hired. Only two of the 17 workers who became disabled while in the firm's employ became disabled because of a job-related injury or illness. However, many workers who were already disabled when hired were not accommodated until some time later.

Types of jobs held by persons receiving the accommodations in this sample are illustrated in Table IV-3. Over 70% of them were in white-collar occupations; of those about half were clerical. The blue-collar workers are distributed about equally among skilled and unskilled jobs. The wages of these workers are summarized in Table IV-4. Well over half of these workers had received merit raises and/or promotions since the time they were accommodated. Most others had been accommodated recently enough that the question was not really applicable.

Table IV-1

Accommodation and Frequency of Response*	
• Gave co-workers and supervisors special training (4)	• Provided fans and vents to remove dust (1)
• Modified bathrooms (2)	• Provided space for seeing-eye dog (1)
• Modified telephones (1)	• Had outside person come in and help handicapped worker adjust to job (1)
• Modified the work area (adjusted desk, rearranged furniture, etc.) (19)	• Developed special evacuation plan for handicapped people (2)
• Relaxed dress code (1)	• Assigned more supervisors to handicapped workers (1)
• Instructed other workers to provide assistance (7)	• Reassigned employee when he could no longer do a particular job (1)
• Hired an outside consultant to help make accommodation decisions (1)	• Waived sight requirements in company physical (1)
• Adjusted work hours (5)	• Exempted employee from having to drive company vehicle (1)
• Helped with transportation to and from job (4)	• Changed supply requisition procedure from verbal to written format (1)
• Made building accessible (7)	• Provided special clerical support (1)
• Oriented co-workers (8)	• Transcribed materials into braille (1)
• Reassigned certain tasks to other workers (9)	• Don't require employee to travel or do heavy work (1)
• Provided worker with extra training (10)	• Provided footrest for employee with legs of different lengths (1)
• Provided special parking space (7)	• Assisted employee in finding suitable work (1)
• Provided special extra equipment (19)	• Provided employee with an electric cart (3)
• Made special negotiations with union (1)	• Allowed for a longer training period (1)
• Designed entire job specifically for a handicapped person (1)	• Modified job so no lifting or climbing in case of emergency (1)
• Purchased wheelchair (1)	• Provided interpreter during training (1)
• Adjusted height of operating machine (1)	• Provided aids for reading and writing on business trips (1)
• Moved person to a new job following an accident (2)	
• Assigned readers (1)	
• Put flashing lights on fire alarm (1)	
• Maintained a wheelchair (1)	
• Allowed person to work at own pace (1)	
• Moved work site to more convenient location (5)	
• Helped pay insurance (1)	

*Some individuals had multiple accommodations.

Table IV-2

Examples of Disability Types*	
• Deaf and mute (2)	• Severe asthma (1)
• Cerebral palsy (4)	• Deaf (6)
• Quadraplegic (3)	• Diabetes and kidney failure (1)
• Epileptic (2)	• Deformed bones in spinal cord (1)
• Mentally retarded (2)	• Hearing impaired (3)
• Visually impaired (3)	• Total replacement of knees (1)
• One leg shorter than the other -- mobility impaired (1)	• Loss of vision in one eye (1)
• Paraplegic (8)	• Legs paralyzed, limited use of arms (1)
• Blind (10)	• Amputee (leg) (2)
• Missing one lung (1)	• One arm locked in extended position (1)
• Polio -- mobility impaired (3)	• Multiple sclerosis (1)
• Lost an arm (1)	• Back injury (2)
• Congenital leg defect (1)	• Deaf and blind (1)
• Impaired use of legs (1)	

*Some individuals had multiple disabilities.

Table IV-3

Examples of Job Titles	
• General clerical (5)	• Distributes computer printouts as they come off the printer (1)
• Actuarial assistant (1)	• Drafting (2)
• Receiving clerk (1)	• Drafting and design of new computer (1)
• General clerk with accounting duties (1)	• Runs oven that bakes enamel onto surfaces (1)
• Computer programmer (3)	• Makes plastic parts (1)
• Research assistant for computer programmer (1)	• Operates pre-splice machine (1)
• Designs software systems for flight control data (1)	• Runs baking machine (1)
• Designs computer programs that estimate construction costs and schedules (3)	• Presses the tops of pants (1)
• Systems analyst (3)	• Production supervisor (1)
• Senior associate programmer (1)	• Switchboard operator (1)
• Tool maker (1)	• Assistant bookkeeper (1)
• Tests electronic components (3)	• Payroll clerk (1)
• Assembles electronic components (3)	• Transcribes medical dictation (1)
• General assembler (5)	• Cost accountant (2)
• Keeps track of and calibrates tools, issues catalogues (1)	• Processes paychecks (1)
• Telephone sales representative (1)	• Packs products and does supply inventory (1)
• Janitorial work (2)	• Shipping clerk (1)
• Maintains and controls heat processor (1)	• Word processor (1)
• Monitors controls of combustion system (1)	• Industrial nurse (1)
• Operates boiler controls for warehouse (1)	• Purchases spare parts and maintains inventory (1)
• Delivers paperwork, filing, runs copy machine (1)	• Licensed practical nurse (1)
• Opens, sorts, delivers, collects mail (2)	

Table IV-4

Wages of Accommodated Workers	
Wage	Frequency of Response
Less than $10,000	4
$10,001-$15,999	19
$16,000-$20,999	12
$21,000-$25,999	14
$26,000-$30,000	7
Over $30,000	1
Not given	28
Total	85

Respondents were asked whether the accommodation decision was part of the hiring decision or was made independently. The vast majority of the respondents considered these decisions to be independent of one another. The hiring decision was regarded as the more important, with the primary factors in this decision being the applicant's qualifications and ability to do the job. In many cases, the issue of accommodation was not addressed until after the hiring decision had been made. Relatively few hiring decisions were affected by the need for an accommodation. In most of these cases, the cost of the accommodation was cited as one factor which might influence the hiring decision.

Most company procedures for handling accommodation issues during the hiring process fell into one of the following categories:

- the company representative and the applicant discussed accommodation needs freely and openly during the interview;
- the interview concentrated only on the applicant's qualifications, not the need for an accommodation;
- the issue of accommodation was discussed only if the applicant brought the subject up.

The Accommodation Process

Respondents were asked to describe the accommodation decision and implementation process. The involvement of a number of actors in the process is shown in Table IV-5. In less than one-fourth of the cases was the original request for accommodation made by the handicapped worker. Handicapped workers were more heavily involved in determining the adequacy/appropriateness of their own accommodations and in planning or designing them. In fact, a number of persons both within the firm and elsewhere took part in these processes. As expected, the final decisions were most often made by management or other individuals somewhat removed from the actual worksite. However, the involvement of such persons throughout the accommodation process shows a clear interest on the part of the firm as a whole in helping the handicapped worker. Few problems or instances of persons questioning the need or feasibility of accommodations were noted. Even fewer persons objected to the cost level of the accommodation.

Respondents were asked whether the decision process differed from the company's usual procedure for making personnel decisions or other accommodation decisions. Most respondents simply said that the procedure used in making the described accommodation was considered "typical," with only a few saying it was not. A moderate number said that there were no "typical" procedures for cases involving accommodation. Other respondents went beyond the described accommodation to discuss their idea of a "typical" accommodation process. Some examples given by individual respondents are given below:

- most accommodations involve the use of questionnaires to identify needs, followed by budget proposals and cost/benefit analysis;
- accommodations initiated by complaints are considered "typical";
- "typical" case is where handicapped individual describes disability and needed accommodation in employment application.

Table IV-5

Actors in the Accommodation Process

	Originated Accommodation Request	Was Consulted About Adequacy or Appropriateness	Participated in Design or Planning	Had Final Approval Authority
Top level manager	6	10	12	27
Personnel department official	21	24	24	10
EEO officer	6	9	9	4
Department head	10	16	19	19
Direct supervisor	20	23	22	6
Co-worker(s)	3	1	1	0
The handicapped worker	19	24	24	2
Other employee	13	21	23	5
Union representative	1	1	3	1
VR counselor or job service placement official	2	6	9	1
Other person outside firm	5	[illegible]	9	0
Not sure	0	0	0	0

Accommodation Costs

The costs of these exemplary accommodations were, in all but a few cases, very low or considered inconsequential. Many respondents did not know the total cost of the accommodation. The reported costs are listed in Table IV-6

Table IV-6

Accommodation Cost	
Cost	Frequency of Response
None	11
$1-99	2
$100-$499	4
$500-$999	2
$1,000-$1,999	8
$2,000-$4,999	5
$5,000-$9,999	4
$10,000-$14,999	4
$15,000-$19,999	0
$20,000 or more	4
Unknown or not reported	31
Total	85

About one-fourth of the interview respondents indicated that a formal cost estimate was done as part of the planning for the accommodation. The following cost categories were considered in the estimating process:

Cost of special equipment purchased (20);
Cost of other materials purchased (11);
Cost of labor for installation (12);
Cost of expert/consultant time for planning or design (3);
Cost of manager's time in planning or supervising (4);
Cost of ongoing maintenance or operation (7);
Cost of benefits or side-effects (5); and
Any other costs (2).

Only a few of these respondents were able to specify what had been the dollar amount of the estimate, and they all stated that the estimates had been either accurate or more than the final accommodation cost. For the most part, the actual accommodations were paid for out of a regular budget category, such as training, equipment, or capital budget. About 10% of firms had a special budget category that could be used for accommodation.

Accommodation Impacts

Without exception, the respondents to the telephone interview were pleased with the outcomes of the accommodations discussed. Most were clear in stating the reasons for the accommodations' success. About three-fourths had formally or informally evaluated the accommodation's outcomes. Many times this evaluation process went along with the performance appraisal of the new (or newly-promoted) employee, and thus took several months. In other cases, it could be determined immediately that the accommodation would have the desired effects. About one-half of these accommodations could still be used by the worker after a job change or promotion, and thus were considered conducive to upward mobility. Slightly over half of the accommodations discussed had no effect on co-workers; the remainder were more likely to be concretely helpful to other workers than to inconvenience them.

In discussing the effects of the accommodations, respondents stated in general what were the most important characteristics of a successful accommodation. They cited considerations such as the following:

- impact on the job performance of the handicapped worker, such as:
  - -- accommodation helps worker do the job;
  - -- accommodation results in an increase in productivity;
  - -- benefits outweight costs;
  - -- accommodation is actually used.
- impact on the firm as a whole. An accommodation is considered to be successful if it satisfied all involved parties: the handicapped worker(s), non-handicapped workers, and company management. An accommodation must not cause controversy.

- effect on the handicapped worker, such as:
  -- accommodation addresses the individual's needs;
  -- accommodation allows for a sense of independence and a "part of the team" feeling;
  -- individual is not stigmatized by the accommodation.

Other responses included:

- accommodation meets the goals established beforehand;
- accommodation provides additional safety;
- accommodation meets federal regulations; and
- excessive costs are not involved.

Accommodation and Related Practices

Only one firm reported having established a maximum cost beyond which an accommodation would not be considered reasonable. The dollar amount was not stated. A few firms had established other guidelines or a formula for deciding reasonableness. Some said they use cost/benefit analysis to determine the feasibility of a proposed accommodation. In some cases, an actual formula is used, in others the decision is intuitive. One respondent said an accommodation is considered to be reasonable if it increases the worker's function by 80%. A few firms said they use guidelines developed by local rehabilitation/social service agencies, but don't have any of their own. Other, more formal, guidelines included the following:

- company engineers must approve all accommodation designs
- doctors representing both the company and the handicapped employee give their opinions on what is needed/reasonable. If they do not agree, a third doctor arbitrates.

Less than one-third of these firms have regular procedures for keeping records of accommodations. An even smaller minority of firms have specific ways of determining whether jobs are well-suited to handicapped workers. Some firms have changed entry requirements or selection procedures for handicapped applicants. For instance, when interviews with handicapped applicants are conducted by individuals outside of the personnel department and the applicant has a hearing/speech impairment, a written interview may be allowed instead of the traditional verbal one. Other popular changes

included modifying job descriptions and requirements to allow more handicapped applicants. Examples of this are making job requirements about lifting more flexible and waiving or modifying eye and driving tests. Other firms mentioned that the employment application had been modified. One firm changed a question from "Are you handicapped?" to "Do you have any handicap that could impair your ability to do this job?" Others provided space for the applicant to describe any necessary accommodation. One firm sent potential employees with handicaps to a special learning class prior to hiring.

Respondents were asked whether the firm's experiences with accommodation had had an effect on overall policies regarding employment of handicapped persons. Most respondents indicated that overall policies regarding employment of the handicapped had not been influenced by experiences with accommodation. These policies remain the same regardless of any good or bad experiences the firm may have had with accommodation. Other respondents said that overall company policy had been influenced by experiences with accommodation. In some of these cases, the first accommodation to be undertaken facilitated future accommodations, thus allowing company policy to be made more specific. In other cases, past results of accommodations encouraged the company to adopt a more liberal policy with regard to the handicapped.

There were other specific events or influences cited as having contributed to firms' current policies regarding hiring and accommodating handicapped workers. Many respondents indicated that federal legislation had influenced current policies regarding employment for the handicapped. In a few of these cases, results of a compliance review had necessitated changes in the overall policy. The attitudes of staff members also influenced current company policies. Many of these individuals had been sensitized to the needs of the disabled through the media and personal experience and they influenced the company to change policies toward the handicapped. In other cases, a good relationship with a local rehabilitation or social service agency encouraged changes in company policies. Another influence was an awareness on the company's part that the public was concerned with the rights of the handicapped. Thus, it became good public relations to liberalize current policies.

Finally, employers were asked for suggested recommendations to federal policy-makers about accommodations for handicapped employees. Responses were numerous and showed a high level of interest in affirmative action for handicapped workers. A large group of employers feel that the federal government needs to provide assistance to encourage businesses to hire and accommodate handicapped workers. Some of the kinds of assistance mentioned were:

- financial assistance;
- tax credits;
- technical assistance, such as compiling a list of jobs suitable for the handicapped, and sources where qualified handicapped individuals may be found.

Another large group of respondents feel that the government needs to assist businesses in accommodating the handicapped, but is currently concentrating on the wrong area. For example:

- Firms can't employ the handicapped unless they are trained and qualified. Government and business need to discuss the types of skills needed so that the handicapped are properly trained. Government also needs to ensure that these training facilities are accessible to the handicapped. Government concern should be at the training level, not the employment level.
- Once the handicapped are properly trained, management will hire them without government involvement. However, government could then usefully mount a campaign to educate business about the employability of the handicapped.
- Government also needs to encourage unions to be more flexible when it comes to accommodation.
- Before businesses can hire anyone, the government must put the economy back together.

Respondents also recommended that the government clarify the regulations regarding accommodations. The laws are so confusing that business does not know what the government wants.

- The definitions of "reasonable accommodation" and "handicapped" need to be clarified.

- The purpose of the law is obliterated in a sea of paperwork. Reporting regulations need to be streamlined.
- Regulations need to be flexible and understandable so that business has room to maneuver.
- Regulations need to clearly emphasize voluntary placement and accommodation, not quotas. Technical assistance is more effective than monitoring.

Some recommendations took the form of messages that DOL might usefully pass along to other employers. For example:

- The most popular piece of advice was to face the accommodation decision with an open mind. Respondents admitted initially having reservations about hiring/accommodating handicapped workers, but their presuppositions were eventually disproven with practical experience. Among the more specific pieces of advice were:
  - -- don't assume the handicapped want preferential treatment, they only want a comfortable work environment;
  - -- don't assume the accommodation will be difficult or expensive, it often isn't;
  - -- don't make conclusions about what or how much the handicapped can do; they can often do more.

- Respondents also advised that other employers remember the benefits involved in hiring and accommodating handicapped workers. These benefits include:
  - -- the handicapped are above average, hard-working employees; they are aggressive, loyal, and dependable workers;
  - -- showing flexibility and concern for an individual results in goodwill among all employees;
  - -- hiring and accommodating the handicapped improves community and public relations;
  - -- accommodation is personally gratifying to all involved.

- An important observation made by respondents is that a successful accommodation policy must have the support of top level management. Communication must flow from the top down so that managers and supervisors know their decisions will be supported. Once other employees know that upper management is supportive, they will usually help out.
- Once the decision has been made to hire and accommodate handicapped workers, respondents had this advice:
  - -- use local rehabilitation and other social service agencies for finding qualified handicapped workers; these agencies are very cooperative and are able to provide advice and technical assistance regarding accommodation;
  - -- don't look for only visibily handicapped individuals, many times the handicap is invisible;
  - -- it is very important to communicate openly and directly with the handicapped worker; no accommodation can be successful unless there is a clear idea of needs and potential problems. "Do your homework thoroughly" was one comment;
  - -- use the Affirmative Action or Equal Employment Opportunity Office to coordinate handicap and accommodation issues between the employee and management; make sure this mediation is balanced to ensure one side is not antagonized.

ATTACHMENT V

WORKER SURVEY FINDINGS

WORKER SURVEY FINDINGS

In addition to the main study of federal contractors, a survey was conducted among handicapped workers in selected firms in order to gain information about the direct impacts of each company's accommodation policy, as well as to elicit personal reactions to accommodation-related issues. The sample was not designed to be random; rather it was a self-selecting one in which firms that had provided many accommodations were asked to distribute questionnaires among known handicapped workers.

Completed questionnaires were received from workers representing 22 firms, or nearly one third of those firms requested to participate. Moreover, participation in the survey within these firms was entirely optional. The survey sample thus comprises a rather elite group, as it was the result of three levels of selection. Still, the 145 respondents to the questionnaire represent a broad range of income (Table V-1) and education (Table V-2) levels.

A. Disability and Type of Accommodation

Mobility limitations were the most frequent disability type, with nearly thirty percent of the reported handicaps in this category (Table V-3). Seventeen percent of handicaps were in impaired hearing, and impaired vision and use of arms or hands accounted for twelve percent each. The large representation of these groups is probably not by chance; their high visibility and the general awareness of the nature of their handicaps may have contributed to the likelihood of their being included in the sample.

Respondents reported a large number of accommodation types -- more, in fact, than the total number of handicaps reported (Table V-4). The most common accommodation was orientation of supervisors and co-workers, due probably to its low cost and effectiveness.

From Table V-4 it can be inferred that of the 145 respondents, 92 felt that accommodations had been made for them (based on the "none of the above" responses). Thus, despite the fact all the companies in which these workers are employed were selected as the most exemplary in the sample, and further had selected themselves by agreeing to cooperate, (and

Table V-1

Yearly Gross Earnings

	Number	Percent
Less than $5,000	1	.7
$5,000 - 9,999	25	17.2
$10,000 - 14,999	54	37.2
$15,000 - 19,999	24	16.6
$20,000 - 24,999	16	11.0
$25,000 or more	21	14.5
No response	4	2.8
Total	145	100.0

Table V-2

Education Level

Education Level	Number	Percent
Less than High School	10	6.9
High School or GED	31	21.4
Some College	62	42.8
Four Year College	30	20.7
Advanced Degree	10	6.9
No response	2	1.4
	145	100.0

Table V-3

Nature of Disability*

Nature of Disability**	Responses Number	Responses Percent
Wheelchair User	17	9.4
Other Walking Limitations	37	20.4
Blind - Total	12	6.6
Other Impaired Vision	10	5.5
Deaf	18	9.9
Other Impaired Hearing	13	7.2
Impaired Use of Arms or Hands	21	11.6
Impaired Speech	5	2.8
Cosmetic - Skin	1	.6
Other Mental-Emotional Impairment	1	.6
Respiratory Condition or Impairment	9	5.0
Other Health Condition	13	7.2
Other***	24	13.3
Total	181	100.0

* It should be noted that Table V-3 refers to handicaps, not individuals; the totals on this table are the result of an average of one and one quarter disabilities per worker.

** One category -- mental retardation -- had no respondents.

*** "Other" includes (selected list):

Handicapping Condition	Number of Respondents
Pulmonary and circulatory disorders	6
Back Problems (e.g., scoliosis)	6
Epilepsy and other seizure disorders	4
Kidney, bladder or bowel problems	3
Nervous system disorders	2
Diabetes	2
Dwarfism	1

Table V-4

Accommodations

Accommodation	Responses Number	Percent
Remove Architectural Barrier	14	5.2
Adjust Work Environment	11	4.1
Adjust Furniture	17	6.3
Rearrange Worksite	14	5.2
Move Worksite	5	1.9
Modify Phone, Typewriter	14	5.2
Audio-visual Aids	6	2.2
Other Special Equipment	14	5.2
Transportation, Mobility Assistance	16	6.0
Tasks to other Workers	15	5.6
Modify Hours or Schedules	15	5.6
Change Work Procedures	5	1.9
Provide Aides	10	3.7
Provide Extra Training	12	4.5
Orient Supervisor, Co-Workers	25	9.3
Transfer to Another Job	10	3.7
Other	12	4.5
None of the Above	53	19.8
Total	268	100.0

may have chosen to distribute the questionnaire to only a subset of their handicapped workers with the result that accommodated workers were oversampled) 30% of respondents felt that they had not been accommodated. This is a lower percentage than apparent in the responses submitted by companies. While there could be biases in the response such that accommodated workers more often chose to return the voluntary survey forms than others, this pattern suggests that workers perceive and report accommodation more often than does management. This would be consistent with the overall study finding that accommodations are often small, not costly, informal, and undertaken without fuss. Management may often not become involved at all. On the other hand, it may be the case that even this 30% rate of reported lack of accommodations is low, if some subset of accommodated workers were

either unaware of modifications that were performed, or felt that the accommodations did not apply to them. Many of the respondents provided information about the specific types of accommodations that were done for them. Table V-5 is a selected list of these responses, presenting some of the less frequently reported accommodations.

Table V-6 presents a breakdown of types of accommodation by the nature of handicaps reported. Since many respondents had more than one handicap this table must be analyzed with care. For example, a respondent who is deaf and has walking limitations may appear under both handicaps in the transportation and mobility assistance category -- though this modification has nothing to do with his deafness.

Despite this overlap, it is possible to discern which modifications tend to be made for particular handicaps. Wheelchair-users are most commonly accommodated by the removal of architectural barriers and by rearrangement of the worksite. The blind tend to receive transportation and mobility assistance as well as aid from supervisors and coworkers, while those with impaired use of arms or hands apparently need furniture adjusted or worksites rearranged.

B. Outcome of Accommodation

1. Effect on Workers

Accommodations are required in varying degrees by people with different handicaps. Among the respondents of this survey almost one third could not perform in their current capacity without some sort of accommodation, while over twenty percent found that the accommodation has had no noticeable effect on them or their career (Table V-7).

The need for accommodations seems to vary with the accommodations type (Table V-8). For example, accommodations such as removal of architectural barriers, providing special or modified phones, typewriters, and other equipment, and orienting supervisors and co-workers to provide assistance seem to be on the "mandatory" list; large numbers of beneficiaries of these actions could not do without them. On the other hand, modifications related to rearrangement of furniture and worksite, and provision of

Table V-5

Selected Modification Types

Type of Accommodation	Specific Accommodation Description
A. Adjusting the environment.	1. Provide new lighting fixtures. 2. Cover ceiling with plastic for heat retention.
B. Adjusting table, bench, or desk.	1. Remove rollers from stool.
C. Rearranging other parts of worksite.	1. Lower items stored on upper shelves. 2. Move wall switch to floor 3. Provide private bathroom with cot.
D. Modify phone, typewriter.	1. Provide phone amplifier. 2. Provide flashing light when phone rings. 3. Use word processor instead of typewriter.
E. Provide special equipment, tools or devices.	1. Optacon. 2. Dictaphone. 3. Brailler. 4. TDD. 5. Cart for transporting oscilliscope.
F. Providing transportation or mobility assistance while on the job.	1. Provide electric car. 2. Provide three-wheeled bicycle.
G. Modify work schedules.	1. Time off for exercise class. 2. Time off for doctor's appointments. 3. Time off for speech therapy. 4. Time off for training with guide dog. 5. More frequent restroom breaks. 6. Allow worker to work weekends when not feeling well during week.
H. Changing other work procedures.	1. Allow liquids to be consumed at desk.
I. Orienting supervisors and co-workers to provide necessary assistance.	1. Limit lifting duties for handicapped worker. 2. Train co-workers on evacuation in emergencies.

Table V-6

Accommodation By Disability

	Disability Category													
	Wheelchair User	Other Walking Limitations	Total Blindness	Other Impaired Vision	Deaf	Other Impaired Hearing	Limited Use of Arms	Impaired Speech	Cosmetic or Skin	Other Mental or Emotional	Respiratory Condition	Limitation of Activity	Other Condition	Total
Removed Barrier	8	5	1	0	0	1	5	0	0	0	1	1	1	23
Adjusted Work Environment	2	2	1	2	1	1	3	1	0	0	0	2	1	16
Adjusted Table, Desk	6	6	1	0	1	1	4	2	0	0	0	2	2	25
Other Rearrangement	8	3	0	0	2	1	5	0	0	0	0	1	0	20
Relocated Worksite	1	3	0	0	0	0	3	0	0	0	0	1	0	8
Modified Phone, Typewriter	1	1	1	0	3	6	2	0	0	0	0	0	0	14
Microfilm, Dictaphone	0	1	3	1	1	0	0	0	0	0	0	0	0	6
Other Special Equipment	1	5	3	1	3	1	0	0	0	0	1	0	1	16
Job Transportation or Mobility	1	8	7	1	1	0	3	0	0	0	1	0	0	22
Reassigned Tasks	1	5	1	0	2	1	2	1	0	0	0	3	2	18
Modified Work Hours	5	5	0	0	3	1	4	1	0	0	1	4	1	25
Other Modification of Work Procedure	0	3	0	0	1	0	2	0	0	0	0	1	0	7
Assigned Aides, Reader	0	0	2	0	8	0	0	0	0	0	0	0	0	10
Additional Training	0	2	3	1	4	0	1	0	0	0	0	0	2	13
Oriented Coworkers, Supervisors	4	5	7	1	4	0	3	0	0	1	1	2	4	32
Transferred to Another Job	0	1	2	0	1	0	3	1	0	0	2	1	0	11
Other Accommodation	2	4	0	0	2	0	1	1	0	0	1	4	2	17
None of the Above	1	11	1	5	7	6	6	0	1	0	3	3	14	58

Table V-7

Effect of Accommodations

Effect	Number	Percent of Accommodated Workers
Accommodation allows me to do a job I could not have done without it	28	30.4
Accommodation makes my work easier, but I could have done it anyway.	29	31.5
Accommodation has made little or no difference in my work or my career.	21	22.8
Accommodation allows me to work more accurately or more quickly than I could have done without it.	42	45.7
Accommodation allows me to earn a higher income than I could have earned without it.	16	18.5
Accommodation has improved my career possibilities.	19	20.7
Accommodation has allowed me to get a more interesting job than I could have gotten without it.	15	16.3
Accommodation allows me to get to and from my work, or to move about more easily on the job.	29	31.5

Table V-8

Effect by Accommodation

Effect	Accommodation																	
	Removed Barrier	Adjusted Work Environment	Adjusted Table, Desk	Other Rearrangement	Relocated Worksite	Modified Phone, Typewriter	Microfilm, Dictaphone	Other Special Equipment	Job Transportation or Mobility	Reassigned Tasks	Modified Work Hours	Other Modification of Work Procedure	Assigned Aides, Reader	Additional Training	Oriented Coworkers, Supervisors	Transferred to Another Job	Other Accommodation	None of the Above	Total Number and Average Percent
Accommodation Allows Me to Do the Job																			
Number:	6	4	4	3	2	7	3	3	4	3	6	1	3	2	8	4	2	1	66
Percent:	20.0%	14.3%	8.9%	9.1%	20.0%	22.6%	14.3%	7.5%	9.8%	10.7%	15.8%	14.3%	8.3%	6.5%	13.1%	16.0%	10.0%	9.1%	12.3%
Accommodation Eases Work But Not Vital																			
Number:	2	4	8	6	1	2	3	7	6	4	5	1	5	4	4	4	2	1	69
Percent:	6.7	14.3	17.8	18.2	10.0	6.5	14.3	17.5	14.6	14.3	13.2	14.3	13.9	12.9	6.6	16.0	10.0	9.1	12.9
Accommodation Has Made Little Difference																			
Number:	4	1	4	3	1	4	1	5	5	2	3	1	3	2	3	1	2	2	47
Percent:	13.3	3.6	8.9	9.1	10.0	12.9	4.8	12.5	12.2	7.1	7.9	14.3	8.3	6.5	4.9	4.0	10.0	18.2	8.8

readers, interpreters, some types of special equipment, and mobility assistance tend to make functioning on the job easier for the handicapped person, but are less essential than the first group.

2. Effect on Co-Workers

At least in the eyes of the handicapped workers themselves, accommodations have no major negative effect on co-workers. (Table V-9) Only three respondents feel that their accommodation has put an additional strain on their co-workers, and two detected an unfavorable attitude toward the accommodation among their co-workers. Most comments that dealt with the subject indicated that co-workers have been generally accepting and helpful. The one negative comment in this area dealt not with any inconvenience or additional burden, but with the cost of providing the accommodation.

Table V-9

Effects on and Attitudes of Co-Workers

	Number of Responses	Percent of Accommodated Workers
Accommodation makes co-workers' work easier	31	33.7%
Accommodation makes co-workers'work harder	3	3.3%
Co-workers have favorable attitude toward accommodation	65	70.7%
Co-workers have unfavorable attitude toward accommodation	2	2.2%

3. The Decision-Making Process

The process by which accommodations are adopted varies between firms and between accommodations. Typically, though, the worker is not consulted on the accommodation, either before or after its installation (Table V-10). Input into the decision making process is offered by the direct supervisor, top management, and personnel (Table V-11). The final decision is made either by top management or the direct supervisor, depending on the nature of the accommodation (Table V-12). Accommodations that have to do with the workers themselves (rather than the workplace) tend to be decided on by the immediate supervisor. Examples of these are found in such accommodations as assigning tasks to others, modifying work hours or schedules, providing extra training, and orienting supervisors and co-workers to provide assistance.

Despite the fact that the firms selected had provided a number of accommodations, over twenty percent of the respondents (30) felt that more accommodations would be useful. Twenty-two of those had approached their supervisors with the ideas, and approximately half had a favorable response. A partial list of these additional proposals is presented in Table V-13.

C. Conclusions

Accommodations for handicapped workers tend to be quite simple and inexpensive yet generally effective. They can be as small as removing wheels from a stool, yet for large numbers of workers represent necessary conditions to adequate functioning in their job. The improvement in the work day is not limited to enhanced physical functioning, however; accommodations seem to improve relations between the handicapped workers and co-workers due to increased ability to manage the workload.

Comments offered by workers in addition to their formal responses indicate that the most significant form of "accommodation" is psychological. Most spoke favorably of their working environments, as illustrated by the following excerpts from worker comments:

> (Company) and its employees have made me feel secure and needed in my current position and during the interviews preceding my employment. The emphasis here is placed on the work I am able to do, and the quality, which has created a very positive working atmosphere for me.
>
> (Company) has been very good and very understanding to me. I have never received this in any of my other jobs. They treat me just like everyone else. I am very thankful for this and it means a lot.
>
> (Company) is the greatest company I have ever worked for. They do not expect miracles from those of us who have disabilities. Instead, they make the needed accommodations and allow one to work at his own pace. From the top brass down, there has never been one negative comment concerning my disability. I feel extremely fortunate to be employed by (company).

On the other hand, even within these exemplary firms, some workers felt that accommodation efforts were not all they might have been:

> Accommodations made only when unavoidable. Lack of understanding regarding use and capabilities of various accommodations has prevented promotions when due. Lack of accommodations used as reason for refusal to promote.
>
> I feel (company) has some supervisors and managers that are not sensitive to employee problems.
>
> I could not do it on (company) time, so I had to do it on my own time. Also, (company) would not pay for any of it, so I had to pay for it.

In many cases of non-accommodation, however, it could be that the accommodations are so unobtrusive that they go unnoticed. Alternatively, workers may be unaware of what was done or may feel that it does not apply to them. In any case, increased communication between workers and supervisors seems to be in order, both to clarify workers' needs and to ensure that they are aware of what has already been accomplished.

Table V-10

Worker's Role in Decision Process

	Number	Percent of Accommodated Workers
Did you request accommodation?	36	39.1
Were you asked if accommodation adequate or appropriate?	38	41.3
Did you help design accommodation?	9	9.8
No participation in accommodation process.	24	4.2
Other participation in accommodation process.	5	5.4

Table V-11

People Involved in Accommodation Decision

	Number	Percent of Accommodated Workers
Top Management	24	26.1
Co-Workers	10	10.9
Supervisor	53	57.6
Personnel	23	25.0
Other Person	13	14.1
Not Sure	11	12.0

Table V-12

Who Made Final Accommodation Decision

	Number	Percent of Accommodated Workers
Top Management	25	27.2
Direct Supervisor	25	27.2
Personnel	9	9.8
Other	9	9.8
Not Sure	17	18.5
No response	60	9.3
Total	145	100.0

Table V-13

Additional Modifications Desired by Workers

Type of Accommodation	Specific Accommodation
A. Adjusting the work environment.	Provide ramp to elevators.
B. Adjust furniture.	Provide circulating fan.
C. Rearrange worksite.	Lower elevator buttons.
D. Modify telephone, typewriter.	Provide speaker phone.
E. Provide special equipment, tools or devices.	Visible fire alarm.

In the attachments and the case study volume that follow are presented many specific ideas gathered in the field on what firms can do to accommodate workers. Some of these ideas are taken directly from the "success stories" observed during the study. Some are suggestions made by managers, EEO officers in firms, supervisors and others interviewed. Readers are urged to read the case studies in the companion volume if they want additional insight into the "how to" of accommodation.

Here, the focus has been on larger policy questions concerning accommodation. What firms have been doing in routine accommodation is impressive and illustrates again how public policy regulating industry can often be formulated with a very imperfect understanding of what firms are currently doing and experiencing. One of the most promising new [illegible] in public policy toward employment of the disabled can be in the recognition that private industry has a major role to play and that a public-private partnership in employment and accommodation is needed.

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